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April 15, 2002

Ms. Kristy Chew  
Siting Project Manager  
California Energy Commission  
1516 Ninth Street, MS-15  
Sacramento, CA 95814

RE: Data Responses, Set 3A  
Cosumnes Power Plant (01-AFC-19)

On behalf of the Sacramento Municipal Utility District, please find attached 12 copies and one original of the Data Responses, Set 3A, in response to Staff's Data Requests dated April 5, 2002. As part of this data response, 5 copies of the EBASCO report (Data Request #208) are also being submitted.

Please call me if you have any questions.

Sincerely,

CH2M HILL



John L. Carrier, J.D.  
Program Manager

c: Colin Taylor/SMUD  
Kevin Hudson/SMUD  
Steve Cohn/SMUD

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# **COSUMNES POWER PLANT (01-AFC-19)**

## **DATA RESPONSE, SET 3A**

Submitted by  
**SACRAMENTO MUNICIPAL  
UTILITY DISTRICT (SMUD)**

April 15, 2002



2485 Natomas Park Drive, Suite 600  
Sacramento, California 95833-2937

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COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

**Technical Area: Air Quality**

**Author:** Tuan Ngo, P.E.

**CPP Authors:**

**BACKGROUND**

It has come to staff's attention that SMUD is in the process of negotiating an offset package with the Sacramento Metropolitan Air Quality Management District (SMAQMD) and other air districts, which involves the use of modeling analysis to derive a ratio for inter-pollutant trade-offs. Because of the complexity of the modeling, and to facilitate staff's air quality analysis of the project, staff should be involved in the discussions with other regulatory agencies.

**DATA REQUEST**

184. Please provide all correspondence, including those by means of electronic communications, with all air districts, the ARB, and the EPA that are related to the securing and use of offsets, and the development of the modeling analysis to derive the inter-pollutant offset ratio.

**Response:** A response to this data request will be submitted by May 6, 2002.

185. Please provide any additional information regarding offsets that were not discussed in the application for certification (AFC), but are being considered by the applicant.

**Response:** A response to this data request will be submitted by May 6, 2002.

**Technical Area: Biological Resources**

**Authors:** Melinda Dorin and Rick York

**CPP Authors:**

**BACKGROUND**

In the AFC page 8.2-15, in the Impacts to Trees section it states that impacts to trees are unlikely, but if it becomes necessary to remove tree(s) then the loss will be mitigated in accordance with the appropriate requirements specified by the County Tree Coordinator. However, Sacramento County has a Tree Preservation Ordinance (SCC 480 §1, 1981) to protect heritage trees.

**DATA REQUEST**

186. Provide a figure that shows where heritage trees are located along the proposed pipeline that may be impacted by construction activities (e.g., trenching, boring, heavy equipment maneuvering with a tree's dripline).

**Response:** A response to this data request will be submitted by May 6, 2002.

187. If any heritage trees are identified along the proposed pipeline, discuss measures that will be taken to mitigate any impacts.

**Response:** A response to this data request will be submitted by May 6, 2002.

**BACKGROUND**

Table 8.14-8 in the AFC lists all of the potential wetland areas that will be crossed by the proposed gas pipeline. The table includes information on the type of wetland area, and how and when it will be crossed. Figures 6.1-1 through 6.1-6 from the AFC depict the proposed gas pipeline route and what methods will be used to lay the pipe. Staff needs more information on the crossings to analyze potential impacts to Biological Resources.

**DATA REQUESTS**

188. Provide an updated table that includes all of the following: any changes to the methods used to cross wetland areas from that presented in the AFC, the amount of habitat disturbance (acreage) at each crossing, bore length where appropriate, and the anticipated distance from the water's edge to the bore site.

**Response:** Acreage of wetlands will be compiled as the delineation information is completed, an approximation can be provided on May 6.

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189. Provide updated Figures 6.1-1 through 6.1-6 that depict where the laydown areas will be located along the gas pipeline.

**Response:** The main delivery and laydown area for pipeline construction will be at the SMUD Construction Yard near Grant Line Road and Highway 99 (10577 E Stockton Boulevard). This area will be used for delivery of large equipment, vehicles, vehicle maintenance, materials storage, and the field offices. The site comprises approximately 2 acres of fenced grounds, with packed earth and gravel areas. There is no vegetation or other biological resources on the site. It is located in the southern portion of Elk Grove, in an area dedicated primarily to industry. Surrounding uses include the Suburban Propane storage tanks, Sierra Pacific lamination factory, a Meeks construction materials yard, two gas stations and a golf course. Laydown areas along the pipeline are generally determined by the contractor selected to construct the gas pipeline. As noted previously this work has not yet been awarded. The contractor will be required to remain within the 75-foot wide corridor for ongoing construction activities such as pipe laydown, work vehicles, welding and trenching. The contractor may negotiate with landowners in the vicinity for temporary laydown if a larger area for pipes or similar non-hazardous equipment is required.

## **BACKGROUND**

The proposed gas pipeline will cross the Cosumnes River Preserve owned and managed by The Nature Conservancy and land owned by the California Department of Fish and Game (CDFG).

## **DATA REQUEST**

190. Provide a letter from the Cosumnes River Preserve Manager that states that they have been consulted about the alignment of the gas pipeline and outlines any potential outstanding biological issues on the Cosumnes River Preserve that need to be addressed.

**Response:** A letter has been requested and should be available by May 6, 2002.

191. Provide a letter from the CDFG that states that they have been consulted about the alignment of the gas pipeline through CDFG property and outlines any potential outstanding biological issues on CDFG lands.

**Response:** A letter has been requested from CDFG and will be provided as soon as it is received.

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## BACKGROUND

The proposed gas pipeline crosses a significant created vernal pool mitigation bank along the railroad tracks at approximately mile marker 3.0 as shown in Table 8.14-8. Staff needs more information on the compatibility of construction activities within a vernal pool mitigation bank. Staff is concerned that construction within a mitigation bank would significantly harm biological resources.

## DATA REQUEST

192. Provide information on whether construction activities are legally compatible with the mitigation bank. Provide information on what types of conservation easements are on the property, if applicable.

**Response:** The area west of the pipeline and immediately south of Elk Grove Boulevard is held under conservation easement to mitigate for vernal pool losses from residential development. The "Laguna Stonelake preserve" is currently owned by AKT Associates, and is planned for transfer to the USFWS to be operated as part of the Stone Lakes Refuge system. The conservation easement is held by the Habitat Management Foundation. Ken Whitney of Foothill Associates is the CEO of that organization (916/782-1011). Mr. Whitney specifies that in order to grant a new easement for the pipeline, the landowner would need the concurrence of The Habitat Management Foundation and the U.S. Fish and Wildlife Service. Mr. Whitney further requests the Applicant consider moving the pipeline to the east side of the railroad to avoid the conservation easement area (see Data Response #193 below).

The property supports approximately eight constructed vernal pools that would be within the indirect impact area of the pipeline. Based on preliminary route analysis it appears that all direct impacts to constructed vernal pools can be avoided in this area, as there is a buffer of approximately 50 feet between the easternmost edge of pools and the railroad property. In this area, pipeline construction could be constrained to a narrower corridor than 75 feet to avoid direct impacts. The Applicant has requested copies of the wetland maps from Mr. Whitney so that the location of constructed pools can be confirmed. SMUD has not yet received these figures to confirm.

193. Please discuss the feasibility of alternative routes to avoid the mitigation bank.

**Response:** An alternative route to avoid this particular section is presented in AFC Section 6.2. The alternative route is to proceed east on Dwight Road (or another east-west road that is north of mile marker 3.0) toward Franklin Boulevard, then south on Franklin Boulevard to mile marker 3.87 (AFC Figure 6.1-3), where the UPRR tracks cross Franklin Boulevard.

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Construction in Franklin Boulevard would have significant impacts to traffic and transportation along the two-lane stretch of Franklin Boulevard, with anticipated one-way traffic control. Alternatively, construction of the pipeline south of Elk Grove Boulevard located outside the pavement and adjacent to the roadway would encounter significant wetland areas, and would not be an attractive alternate from a biological point of view. Given the alternatives, construction adjacent to an existing railroad right-of-way appears to the Applicant to have the least overall impact.

## **BACKGROUND**

AFC Supplement A, docketed March 15, 2002, Section 3.2 Biological Resources states that the addition of the compressor and valve stations will have minor temporary impacts to biological resources. No information is provided on what those impacts may be.

## **DATA REQUEST**

194. Identify what the potential impacts are from the additions of the gas pipeline compressor and valve stations, how long construction will take, and what species may be affected.

**Response:** The potential biological resources and impacts are identified in Supplement B to be filed on April 15, 2002, under separate cover.

195. Provide a figure with a scale of 1"=500' that shows the compressor and valve stations, and the sensitive biological resources out to 1,000 feet from the proposed sites.

**Response:** These figures are provided as part of Supplement B (Figure 2.2.1-1 and 2.2.2-1).

## **BACKGROUND**

During the bus tour of the gas pipeline route on January 23, 2002, sandhill cranes were identified on the north side of the Cosumnes River near the proposed gas pipeline bore site. The sandhill crane was not identified in Table 8.2-3B, included with the response to Data Request 26, as a state threatened species potentially occurring within 1 mile of the CPP Project area.

## **DATA REQUEST**

196. Please identify how impacts to sandhill cranes will be avoided during the gas pipeline construction.

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**Response:** Sandhill cranes winter in the Cosumnes River Preserve from approximately September 15 to March 15 each year. They occur in large flocks on the preserve, and fly out daily to surrounding farmland to feed. They were observed on the parcels east of the Cosumnes River proposed for the pipeline construction during early spring of 2002.

Pipeline construction in the vicinity of waterways is generally planned for the driest possible time to avoid adverse impacts to water quality. This would be inconsistent with the period when sandhill cranes are present in the area. However, to the extent there could be some overlap in construction activities, it should be noted that there would be no construction in the rice fields and preserve lands of the Cosumnes within 5 miles of Interstate 5 (which is the greatest concentration area) and from one day to the next, construction would proceed slowly south. Sandhill cranes would temporarily avoid the immediate vicinity of construction for a distance of approximately 0.25 mile, but would be able to use that area after construction has passed through. Sandhills are strong fliers and use the Central Valley as far south as Stockton and as far north as south Sacramento. Therefore, there is ample area for these birds to forage during construction, if both occur contemporaneously.

## BACKGROUND

In Section 5.3 (Transmission Interconnection) of the AFC it states that 0.4 miles of transmission line will be constructed to tie in to the existing Rancho Seco Plant switchyard. Figure 5.3-1 depicts the proposed transmission line route on a map with a 1"= 2000' scale. Staff needs more detailed information to address potential impacts to biological resources.

## DATA REQUESTS

197. Provide a new figure at a scale of 1"=500' that depicts the proposed transmission line tower footings, and sensitive species and habitats at a radius of 1,000 feet from the tower footings.

**Response:** Figure 8.2-1 of the AFC shows this area at a reduced scale. A revised figure at 1" = 500' will be prepared for submittal on May 6.

198. Provide information on construction impacts from the transmission line towers. Calculate and provide the amount of (acreage) temporary and permanent disturbance.

**Response:** Table BR-198 quantifies the acreage of disturbance from transmission line towers that are outside the project site footprint. This information supercedes estimates provided in Table 8.2-4 of the AFC.



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**TABLE BR-198**

Construction impacts from transmission line towers.

Feature	Details of Use	Size	Temporary	Permanent
Length	0.4 miles from CPP to RSP	230 kV	-	-
Construction Type	Monopole	-	-	-
Tower Footings	Four monopoles outside the project footprint will be supported on 4 concrete foundations	4 x 6' diameter (113 sq. ft.) x 20 feet deep	-	0.002 ac
Tower Assembly	Temporary construction area 150' square at each of 2 tower locations. Each location serves 2 towers.	150' square (22,500 sq. ft.)	0.52 ac	
Access to String Wires	Wires will be strung from RSP and from project site	0	0	0
<b>Total</b>			<b>0.52 ac</b>	<b>0.002 ac</b>

199. Will a road be maintained along the transmission line route to do routine maintenance? If so, depict the location of the road on the figure.

**Response:** No permanent access road will be constructed along the transmission lines.

## BACKGROUND

At the Data Response Workshop on February 24, 2002 there was a discussion between staff and EJ Koford about the response to Data Request 8 and the anticipated schedule for the federal lead agency to initiate consultation. Table BR-8 shows the anticipated consultation schedule as well as two potential lead agencies. It was stated during the Data Response Workshop that the U.S. Army Corps of Engineers (ACOE) will act as the federal lead agency for the project, but that has not been confirmed.

## DATA REQUESTS

200. Provide a letter from the ACOE that they will act as lead agency for the Cosumnes Power Plant Project and consult with the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS).

**Response:** The ACOE has indicated verbally that it is willing to act as lead agency. We will attempt to get a letter from ACOE confirming this in time to file it on May 6, 2002.

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201. Provide a new proposed schedule that identifies when the Biological Assessment will be submitted to the USFWS and NMFS, and when CDFG permits (2081 and 1601) and Regional Water Quality Control Board 401 certification applications will be submitted.

**Response:** A response to this data request will be submitted by May 6, 2002.

## **BACKGROUND**

A wetland delineation is being completed for the project site and all associated facilities. There is a potential for several rare plants to be present at the site and along the gas pipeline route. The Special-Status Biological Resources Survey for the Twin Cities Power Plant Project, July 2001 submitted as Attachment BR-17 outlines rare plant surveys completed within the vicinity of the power plant site. Rare plant surveys should also be conducted along the gas pipeline in areas that are not heavily disturbed.

## **DATA REQUEST**

202. Provide rare plant survey results for areas along the gas pipeline in areas where there is potential for rare plants to be located. As an example, surveys are not necessary where the proposed gas pipeline may go through a vineyard.

**Response:** As noted in Table 8.2-3 of the AFC, many of the rare plants that are known or that may occur in the project area bloom beginning in May. The Applicant intends to initiate surveys in May and have them completed by June 10<sup>th</sup> (depending on seasonal conditions).

## **BACKGROUND**

A Wetland Delineation Report for the Proposed South Sacramento Power Plant at Rancho Seco, Sacramento County, California by Davis Environmental Consulting was submitted with the Response to Data Request 18 on February 4, 2002. The Figure Exhibit 1 accompanying the report was not included.

## **DATA REQUEST**

203. Please provide a copy of the Figure Exhibit 1 from the Davis Environmental Consulting report.

**Response:** Copies of Figure 1 will be provided on May 6, 2002.

## **BACKGROUND**

Data Request 31 asked for burrowing owl surveys to be conducted for the project site and associated linears. The response provided March 19, 2002 states that burrowing

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owl surveys are being done along with the wetland delineation. The Burrowing Owl Consortium recommends that winter surveys (December 1 – January 31) and nesting season surveys (April 15 – July 15) for burrowing owls should be completed in order to assess potential impacts as accurately as possible (Burrowing Owl Survey Protocol and Mitigation Guidelines, 1993). Staff needs to confirm that nesting season surveys for burrowing owls will be completed so staff has sufficient information to complete its analysis.

## DATA REQUEST

204. Provide results for burrowing owl nesting season surveys (field survey dates, names and qualifications of biologists) and include the locations of occupied burrows on a figure with the scale 1"=500'.

**Response:** A memo addressing field surveys of Burrowing Owls is included as Attachment BR-204.

## BACKGROUND

In the AFC Section 8.2, Biological Resources, habitat compensation as mitigation for potential impacts is not addressed. Due to temporary and permanent impacts from the project, staff thinks it is likely that habitat compensation will be required.

## DATA REQUEST

205. Provide information on where habitat compensation can be acquired in Sacramento County, and what entity would receive the funds.

**Response:** In approximately 1996, SMUD proposed to build a golf course in the vicinity of Rancho Seco, and developed an agreement with USFWS to provide mitigation in the form of lands east of the reservoir that would be operated by the Sacramento Open Space Lands Conservancy. The golf course was never built, but the quality and quantity of lands were reviewed and approved by USFWS and CDFG. SMUD anticipates using habitat compensation lands in this area as mitigation for potential impacts from the CPP project.

## BACKGROUND

Data Response 20 (Set 1H) provided figures depicting wetland areas located within 125 feet of the 26-mile natural gas alignment and a very general summary of the wetlands.

Data Requests 19 and 20 requested a figure (with a scale of 1"=100') outlining the vernal pools and where jurisdictional wetlands occur within 250 feet of the linear facilities and a table that estimates the amount of wetland habitat that may be directly or indirectly impacted with a 250-foot buffer surrounding vernal pools, respectively.

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**DATA REQUEST**

206. Please provide the wetland delineation surveys that were completed for the alignment. Include a figure with the delineation points mapped, the wetland delineation sheets that were completed, a timeline for when the wetland delineation will be submitted to the Army Corps of Engineers for jurisdictional wetland classification, and a discussion of when consultation with the USFWS is expected.

**Response:** Field surveys have been completed, and the Applicant is in the process of preparing maps for submission to the ACOE. On March 29, 2002, the Applicant provided a preliminary draft of this information in its present stage for CEC's information. When the delineation information is complete, a copy will be provided to the CEC.

Regarding estimated timing of consultation with USFWS, please see response to Comment 201.

207. Please provide a figure and table that satisfies the requests of Data Requests 19 and 20.

**Response:** Wetlands in the project area are shown on Figure 1 of the wetland delineation report prepared by Davis and Associates, requested in Data Request #203.

Wetland delineations for the gas pipeline will be provided when completed.

## Cosumnes Power Plant Natural Gas Pipeline - Burrowing Owls

TO: EJ Koford / SAC  
FROM: Russell Huddleston / SAC  
DATE: April 14, 2002

Field surveys were conducted for wetland features between February 1 and April 13, 2002 along the proposed natural gas pipeline alignment for the Cosumnes Power Plant. These surveys were conducted by Steve Long, Kari Harrison and Russell Huddleston from CH2M HILL. Wildlife and areas of potential habitat were noted along the alignment during the course of the wetland surveys.

One pair of Burrowing owls was observed at a burrow located in an unvegetated earthen roadway embankment along the north side of Sims Road. This pair has been observed on April 13, March 22, and February 1, 2002.

A second of pair of owls was observed on April 13, 2002. This pair was seen at a second burrow within the same roadway embankment on the north side of Sims Road, approximately 100 feet from the first nest location.

Approximate locations are indicated on the wetland delineation maps. This location has apparently not been reported to the CNDDB, however, the Bufferlands staff is aware of these locations and have posted caution signs for burrowing owls along Sims Road.

To date these have been the only sightings of burrowing owls along the proposed alignment from February 1 to April 13, 2002.

### **My Qualifications:**

Russell Huddleston, M.S. – *Biologist*

Mr. Huddleston is a biologist with four years of professional experience who has conducted numerous surveys for special status species throughout California and southern Oregon. His specialties included vernal pool ecosystems, rare plant conservation and plant community ecology. Previous experience includes vernal pool plant community research and conservation management for rare plants including *Astragalus applegatei*, *Lomatium cookii*, and *Limnanthes floccosa* ssp. *grandiflora*.

Mr. Huddleston received his M.S. in Ecology from the University of California, Davis in 2001, with an emphasis in restoration ecology. He received his B.S. in Biology from southern Oregon University in 1998.

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**Technical Area: Cultural Resources**

**Author:** Judy McKeehan and Dorothy Torres

**CPP Authors:**

**BACKGROUND**

The Confidential Appendix 8.3C does not include a complete list of technical reports for the resources identified for the proposed gas line alignment. Data Response #35 (Set 1C) indicates that a copy of the EBASCO 92 report was requested from the California Historical Resources Information System (CHRIS) and would be provided when it was received. To date, Energy Commission staff has not received the EBASCO 92 report.

**DATA REQUEST**

208. Please provide a copy of the EBASCO 92 report.

**Response:** Five copies of this report are included with this submission as Attachment CR-208.

**BACKGROUND**

The Confidential Supplement to Data Response #39 states that on February 22, 2002, CH2M HILL archaeologists relocated the boundaries of CA-SAC-93.

**DATA REQUEST**

209. Please provide the names and qualifications of the persons that conducted the re-survey of CA-SAC-93.

**Response:** A resume for Jim Bard is included as Attachment CR-209.

**BACKGROUND**

Maps 1, 3, 4, and 6 provided as part of Appendix 8.3 DR indicate that several areas along the natural gas pipeline alignment were not surveyed; along the Union Pacific Railroad, north of Elliott Ranch (Map 1); south of Core Road to Eschinger Road (Map 3); areas covered with alfalfa crop (Map 4); and the south side of the alignment from Laguna Road to the Clay Station Road junction (Map 6).

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**DATA REQUEST**

210. When will these areas be surveyed? Please provide the survey results.

**Response:** Unless we are missing something, after reviewing the maps, the only area that was not surveyed is on Map 4 west of mile post 12.39. We were unable to survey the alfalfa field due to zero visibility and the presence of irrigation water. During our December field trip, Scott Clapp indicated that this area will be used for the laydown area for the HDD under Cosumnes River. The only other area that we are aware still needs to be surveyed is the change of the route shown on Map 3 from Core Road to Eschinger Road (see Data Response #223). This segment will be surveyed when the presence/absence testing is done for CA-SAC-68 and CA-SAC-93.

## **Attachment CR-209**

### **JIM SHARPE**

**2907 Troon Ct. Richland, Washington 99352 Phone 509-371-0798**

#### **Education:**

M. S. Resource Management, Central Washington University, June 1997.  
B. S. Anthropology, Central Washington University, June 1994,

#### **Work Experience:**

Cultural Resource Specialist, September, 1996 to present. CH2M HILL Hanford, Inc.,  
3190 George Washington Way Suite A, Richland, Washington. Full-time position.

Duties: Identify and document cultural resource issues and Areas of Potential Effect (APE) related to remediation actions for the environmental clean-up activities at the Department of Energy (DOE) Hanford Site in eastern Washington. Work related expertise includes: preparation of cultural resource reviews to meet federal compliance of Section 106 of the National Historic Preservation Act, prepare cost estimates, budgets, archaeological surveys, record sites, completion of site and isolate forms, field monitoring, shovel testing, excavation, site evaluation, historical research, completion of numerous Historical Property Inventory Forms (HPIFs), experience with Traditional Cultural Properties (TCP's), technical report writing, interact with four local Native American Tribes, maintain a cultural resource data base, manage records and files, and prepare task orders and request for payment forms for Tribal participation for remediation projects. I have extensive experience with prehistoric and historic cultural resources along the Columbia River and a strong background in historic agriculture.

A portion of my work supports Pacific Northwest National Laboratories (PNNL) and other CH2M HILL offices that includes historical research, technical report preparation, and archaeological work. I have archaeological field experience in Washington, Oregon, Nevada, and California and have worked with the Miwok, Torres Martinez, Nez Perce, Yakama, Umatilla, and Wanapum Tribes.

Additional Experience: I support remediation projects with historical research and report preparation. This includes locating project related construction drawings, historical photographs, documentation, and technical report preparation. I also support the weed control program for the Bechtel Hanford Company by monitoring and recommending herbicide applications for unwanted vegetation.

Contract Archaeologist, 1993-1996 for the Grant County Public Utility District, Beverly, WA.

Duties: I conducted the following activities: archaeological surveys, recorded prehistoric and historic sites, updated site forms, historical research, prepared an annotated bibliography of the Wanapum and Priest Rapids Reservoirs, and worked with the Wanapum Tribe.

#### **Publications:**

Sharpe, Jim, J.

2001 *History of River Transportation on the Hanford Reach*. BHI-01561, Richland, Washington.



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Sharpe, Jim, J.

- 2001 *Phase III of the Pre-Hanford Agricultural Period: 1900-1943*, BHI-01566, Richland, Washington.

Sharpe, Jim, J. and Thomas E. Marceau

- 2002 *2001 Archaeological Excavation Report for Extraction Well C3662 in Support of the 100-KR-4 Pump-and-Treat Project*. BHI-01556, Richland, Washington.

Sharpe, Jim, J. K. Linville, C. Trice

- 2001 *100-F Reactor Area Underground Pipeline Historical Information Summary*. BHI-01504, Richland, Washington.

Sharpe, Jim and Thomas Marceau

- 2000 *Archaeological Excavations at the Wanapum Cache Site*. BHI-01375, Richland, Washington.

Sharpe, Jim

- 2000 *Phase II of the Pre-Hanford Agricultural Period: 1900-1943*. BHI-01422, Richland, Washington.

Sharpe, Jim

- 2000 *Chinese Gold Miners of the Mid-Columbia Region: Phase II and Phase III*. BHI-01421, Richland, Washington.

Sharpe, Jim and Jennifer Linville,

- 2000 *100-B/C Reactor Area Underground Pipeline Historical Information Summary*. BHI-01453, Richland, Washington.

Sharpe, Jim

- 1999 *Archaeological Survey of 56 Preselected Parcels on the Arid Lands Ecology Reserve*. BHI-01268, Richland, Washington.

Sharpe, Jim

- 1999 *Chinese Gold Miners of the Mid-Columbia Region*. BHI-01316, Richland, Washington.

Sharpe, Jim

- 1999 *Pre-Hanford Agricultural History: 1900-1943*. BHI-01326, Richland, Washington.

Griffin Paul and Jim Sharpe

- 1999 *Hanford B Reactor Building Hazard Assessment Report*. BHI-01282, Richland, Washington.

Sharpe, Jim

- 1997 *Masters Thesis: Issues and Conflicts in the Management of the Public Domain of the Saddle Mountains in Eastern Washington: A Case Study*.

**Technical Reports:**

*Cultural Resource Survey of Selected Locations for the Consumnes Power Plant Project Rancho Seco, California, 2002.*

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Subsurface testing report for Lewis Canal, 2000.

*100-D-DR Reactor Area Pipeline Evaluations*, 1999.

*History of the 1100 Area*. History of the pre-Hanford era for the 1100 area in support of Pacific Northwest National Laboratory. Richland, Washington, 1999.

*The Geologic Setting, Surface and Subsurface Disturbance History, and the Cultural Resources of the Hanford F Reactor Area*, 1998.

*The Geologic Setting, Surface and Subsurface Disturbance History, and the Cultural Resources of the Hanford D/DR Reactor Area*, 1998.

*The Geologic Setting, Surface and Subsurface Disturbance History, and the Cultural Resources of the Hanford B/C Reactor Area*, 1997.

*Survey Report for the Decommissioning of Listed Wells in the Area East of the Washington Public Power Supply System*. 1997.

*Cultural Resources Activities Conducted in Support of the 100-KR4 Pump and Treat Project*, 1996.

**Field Experience:**

Archaeological survey of an 11 mile gas pipeline for Calpine near Rio Vista, California. Relocate and update an archaeological site near Galt, California for the Sacramento Municipal Utility District, 2002.

Archaeological survey of about 70 acres for laydown areas and an access road for the Sacramento Municipal Utility District (SMUD). Attended a meeting with project personnel and representatives from the Miwok Tribe to address issues associated with the gas pipeline, 2002.

Archaeological excavation for a prehistoric site at UPR-100-F-2 near the F-Reactor area on the Hanford Site. Worked with representatives from the Wanapum Tribe, 2001.

Archaeological survey for the reconductoring of a 25 mile electrical transmission line near San Joaquin, California. 2001.

Archaeological survey and site recording for the Starbuck power plant near the Snake River in eastern Washington. Eighteen miles of electrical transmission line corridor were surveyed. Worked with representatives from the Nez Perce, Umatilla, and Wanapum Tribes, 2001.

Archaeological excavation for extraction well C3662 in support of the KR4 pump and treat project. This project uncovered a 10,000 year old basalt projectile point on a Holocene terrace above the Columbia River, 2001.

Archaeological survey and site recording on Rattlesnake Hills for the Maiden Springs Wind Farm project near Prosser, Washington. Worked with representatives from the Wanapum Tribe, 2001.

Archaeological survey for water and gas pipeline routes near Fresno, California, 2001.

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Archaeological survey of four individual pipeline projects near Modesto, Tracy, San Jose, and Sacramento, California, 2001.

Archaeological survey and site relocations near Palm Springs, California for the Calpine Company in support of a electrical transmission line. Worked with a Native American from the Torres Martinez Tribe, 2001.

Excavation at prehistoric site HT-2001-007, D-Area Hanford Site, Richland, Washington. Worked with Wanapum Tribal members, 2001.

Excavation at the prehistoric site 45-BN-606 at Lewis Canal, Hanford Site, Richland, Washington. Worked with Wanapum Tribal members, 2001.

Subsurface testing at a prehistoric site 45-BN-606 at Lewis Canal, Hanford Site, Richland, Washington. Worked with Nez Perce and Wanapum Tribal members, 2000.

Archaeological excavation of historic Wanapum Tribal caches near H-Reactor Area of the Hanford Site, Richland, Washington. Worked with Wanapum Tribal members, 2000.

Two archaeological surveys in Palm Springs, California for the Calpine Company in support of various proposed gas line routes. Worked with Native Americans from the Torres Martinez Tribe, 2000.

Archaeological survey for the Vernita Block Survey. This survey project supported Pacific Northwest National Laboratory, Richland, Washington. Worked with Tribal members from the Wanapums, Nez Perce, and Yakamas, 1999.

Data collection at three prehistoric sites near Hoover Dam, Boulder, Nevada. Information was collected to determine site eligibility, 1999.

Archaeological survey in the 1100 area of the Hanford Site, The survey supported Pacific Northwest National Laboratory, Richland, Washington, 1999.

Archaeological excavation for the installation of an extraction well for the KR4 Pump and Treat Project, Richland, Washington. Worked with a Native American from the Wanapum Tribe, 1999.

Archaeological survey at Owens Valley, California on the dry Owens Lake bed in support of a clean air project, 1999.

Archaeological excavation in Sherwood, Oregon in support of a Federal highway project for U. S. Fish and Wildlife Service, 1999.

Subsurface testing in Sherwood, Oregon in support of a Federal highway project for U. S. Fish and Wildlife Service, 1998.

Archaeological monitoring of 81 selected cutbanks along the Hanford Reach. The project supported Pacific Northwest National Laboratory, Richland, Washington, 1998.

Archaeological survey for well decommissioning near Washington Public Power Supply System, Richland, Washington. Worked with Tribal members from the Wanapum Tribe, 1997.

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

Archaeological survey in the Wenatchee National Forest near Mission Ridge, Washington for a land exchange, Wenatchee, Washington, 1994.

Archaeological survey for the Grant County Public Utility District in the Priest Rapids and Wanapum Reservoirs of the Columbia River. Worked with Wanapum Tribal members, 1992, 1993, and 1994.

Archaeological field school, Eastern Washington University, 1994.

Archaeological field school, Central Washington University, 1994.

Archaeological field school, Central Washington University, 1993.

Six week archaeological field school, Central Washington University, 1993.

**Public Presentations:**

Pre-Hanford History 7,000 B.C. to 1943, CH2M HILL employee brown bag, Richland, Washington, 2001.

History of Chinese Gold Miners of the Mid-Columbia Region, Lakeside Gem and Mineral Club, Richland, Washington, 2001.

Pre-Hanford History, Columbia River Exhibition of History, Science, and Technology (CREHST) Museum, Richland, Washington, 1999.

History of Pre-Hanford Irrigation, Washington State University Cooperative Education, Richland, Washington, 1999.

Cultural Resource Management for the Environmental Restoration Project, CREHST Museum, Richland, Washington, 1998.

Thesis defense, Central Washington University, Ellensburg, Washington, 1997.

**Additional Training:**

40 hour radiological worker training

First aid training

Private and consultant pesticide license

Experience with 4 wheel drive vehicles and boats

**References:**

Available upon request

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

**Technical Area: Land Use**

**Author:** James Adams

**CPP Authors:**

**BACKGROUND**

On page 8.4-5 of the AFC, under section 8.4.2.2.1 Cosumnes Power Plant Site it states that the proposed project is to be located on two parcels identified as Assessor's Parcel Numbers 140-0050-010 and -008 totaling 30 acres.

Assessor's parcels are not legal land division parcels. Assessor's parcels are generated by a County Assessor's Office as a means of placing a value on property or portion thereof for the purpose of property taxation in accordance to the California Revenue and Taxation Code. The County Assessor does not divide or create parcels of land in conducting this process. The assignment of an Assessor's Parcel Number to a property provides a convenient and quick location reference for the County Assessor to identify a property on the property assessment roll within a County. Legal land division parcels are established in accordance to the procedures and the requirements set forth in the State Subdivision Map Act (Government Code section 66410 – 66499.58).

The status and number of legal parcels of record for this project are not provided in the AFC.

**DATA REQUEST**

211. The power generation facility is to be contained on a 30-acre portion of the 2,400-acre (approximate) property. Is the proposed power plant to be constructed on a single legal parcel of land?

**Response:** The proposed power plant will be constructed on parcels 140-0050-008 and 010 that are currently owned by SMUD. Since SMUD owns both contiguous parcels there is no plan to subdivide the parcels to create a single parcel for the plant site.

212. Please explain whether the applicant is going to be required to file a parcel map with the County of Sacramento to create the parcel(s).

**Response:** The Applicant is not planning to file a parcel map with the County of Sacramento.

213. If not, explain the land division procedure used to create the parcel(s) totaling 30 acres.

**Response:** No land division is required or necessary.

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

214. Does the applicant have two legal parcels or some other number of parcels?

**Response:** The Applicant owns several legal parcels. The CPP plant will be constructed on portions of two of those parcels. As noted from the parcel maps (see AFC Appendix 1A), it was not necessary for SMUD to combine the parcels to create a single parcel for the Rancho Seco Plant and no changes to existing parcels are anticipated for CPP.

215. Provide a copy of the recorded final map, lot line adjustment map, or Certificate of Compliance for the property(ies).

**Response:** See Data Responses 211 to 214.

## BACKGROUND

The California Department of Conservation, Office of Land Conservation has prepared a rating system for land resources called the California Agricultural Land Evaluation and Site Assessment (LESA). The use of LESA criteria provides a methodology for assessing the potential environmental impact of state and local projects on agricultural lands and its conversion. LESA provides an approach for rating the relative quality of land resources based upon specific measurable features. The California LESA is composed of six different factors. Two Land Evaluation factors based upon measures of soil resource quality and four Site Assessment factors that provide measures of a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands.

The final scoring is based on a scale of 100 points, with a given project being capable of deriving a maximum of 50 points from the Land Evaluation factors and 50 points from the Site Assessment factors. The LESA analysis provided by the applicant identifies the score for the project's conversion of 34 acres from an agricultural use to a nonagricultural use is 59.8 points. Using the California LESA Model Scoring Threshold: 0-39 points – the conversion is not considered significant; 40 to 59 points - the conversion is considered significant. Both the Land Evaluation and the Site Assessment sub-scores are each greater than 20 points. This LESA score was determined by staff to be a significant environmental affect for the project's agricultural land conversion and mitigation is required.

## DATA REQUEST

216. Please provide an agricultural loss mitigation plan.

**Response:** Although the LESA form resulted in a score considered "significant," it is our continued contention that this is an inappropriate application for CPP. LESA is designed to protect agricultural land, and includes considerations of economic impact of the loss of land from agricultural production. However, the

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

land impacted by CPP is not prime agricultural land, nor does it represent an important economic resource for the area. LESA's high weighting of even Class III (LCC) soils inappropriately results in a high score for the CPP-impacted areas, when in reality, these areas are slowly being taken out of agricultural production. The LESA form was completed to satisfy CEC's requirement for a quantitative evaluation of the CPP's impact on land and agriculture. However, it is a poorly suited tool in the context of CPP. The AFC provides a more representative and realistic evaluation of soil and agricultural resources. (Please refer to December 12, 2001, memorandum included as Attachment LU-216.) Therefore, Applicant does not believe mitigation is required.

## **BACKGROUND**

In the applicant's data response to staff's Data Request Set 1A, it is noted that the second phase gas compressor station will be located at the PG&E lines 400 and 401 inter-tie at 27700 County Road 29 in the City of Winters. However, this location appears to be approximately four miles north of the City and is in unincorporated land in Yolo County.

## **DATA REQUEST**

217. Please provide the land use and zoning designations, existing and surrounding land uses, and any policies or guidelines related to the Yolo County General Plan and / or Zoning Ordinance.

**Response:** This data request is addressed in Section 2.4.1 of Supplement B.

## Evaluation of LESA Requirement for the SMUD-Cosumnes Power Plant Application for Certification

TO: Kristy Chew/California Energy Commission

COPIES: John Carrier/CH2M HILL  
Steve Long/CH2M HILL  
Kathryn Carrasco/CH2M HILL

FROM: Andrew Sloan/CH2M HILL

DATE: December 12, 2001

### Purpose and Background - California Land Evaluation and Site Assessment (LESA)

The purpose of this memorandum is to provide a comparison of the Land Evaluation and Site Assessment (LESA) process with existing data adequacy requirements established in the application for certification (AFC) process. In establishing this comparison, this memorandum will establish justification for not providing the LESA application as part of the AFC process.

The LESA application was first established 1981 by the U.S. Department of Agriculture Soil Conservation Service (currently known as the Natural Resources Conservation Service) to provide a standard, quantifiable methodology with which to determine the impacts of converting agricultural land to other non-agriculture uses. California's adaptation of the LESA was established, per Senate Bill 850 (1993), as an amendment to the California Environmental Quality Act (CEQA).

The California LESA application includes two Land Evaluation measures of soil resource quality (agricultural suitability), as well as four Site Assessment factors that consider a project's size, water resources availability, surrounding agricultural resources, and surrounding resource lands.

Land evaluation scoring in the LESA application includes consideration of USDA land capability classification (limitation rating for crop production, evaluated per soil mapping unit) and the Storrie Index (suitability score for intensive agricultural production per soil mapping unit). The land capability classification and Storrie Index values for each soil mapping unit are adjusted by the proportion of the area of each site they comprise, thereby resulting in an area-weighted land evaluation score. The Site Assessment portion of the LESA application continues the above analysis with further area weighting to determine the agricultural significance of affected lands.

The Site Assessment factors concerning water resources includes quantification of the area of land supplied by various water sources (e.g., irrigation district, groundwater, etc.) using area- and restriction-weighted (e.g., some impediment to regular water supply) score. The Site Assessment evaluation also includes quantification of the area of agricultural lands around the proposed project site, as well as the presence of protected lands (e.g., public lands, lands with habitats requiring protection easements, etc.).



Based upon the above analysis, a final score is calculated for the site as a whole. Some of the elements in the Land Evaluation and Site Assessment are weighted higher than others, as they are considered more important in evaluating impacts of conversion to a non-agricultural project.

## **Comparison of LESA with Existing CEC Data Adequacy Requirements**

### **LESA Land Evaluation Process**

Preparation of the soils and agriculture section in the application for certification (AFC) to the California Energy Commission (CEC) requires assembly of a wide variety of data elements. Among the various requirements for completion of this section are discussions of the direct and cumulative impacts of the project, descriptions of soil types with respect to depth, texture, drainage, capability classification, erosion hazard, permeability, and drainage. Also required are detailed maps of the proposed project site that include soil types (typically, soil mapping units found on county soil surveys) and farmland designations. The latter describes the quality and type of farmland affected by the proposed project, such as rangeland, farmland of state importance, prime farmland, etc.

Satisfaction of the soils and agriculture data adequacy checklist for the Cosumnes Power Plant included preparation of detailed tables listing each soil mapping unit its respective properties (i.e., texture, land capability classification, Storrie Index, erosion hazard, etc.). Coupled with the required 1:24,000 maps illustrating soil mapping units and farmland classifications, these tables provide a detailed and fairly exhaustive evaluation of the nature of the land affected by the proposed project.

The information contained therein not only illustrates the agricultural value of the lands that are potentially affected by the proposed project, but the potential environmental impacts due to processes such as runoff or wind erosion. Accompanying discussions highlight potential best management practices and mitigation of longer-term impacts germane to construction of a power plant facility.

Although LESA includes a somewhat subjective scoring element by which site impacts can be more quantitatively evaluated, the elements of its Land Evaluation procedure are already presented in the AFC Soils and Agriculture discussion. Indeed, the soils and agriculture discussion, per data adequacy requirements, provides more intensive and detailed review of soil impacts and broader discussion of potential environmental impacts than is required by the LESA process.

Furthermore, no land of agricultural significance will be converted due to construction of the Cosumnes Power Plant, as restoration of any affected soils to original land use and condition will be conducted after completion of construction activities. The plant site itself resides only on grazing land. Given the above points, it is believed that the LESA process is both redundant to the existing process used to satisfy CEC's data adequacy list, and would be otherwise overly burdensome to prepare with little additional benefit gained.

### **LESA Site Assessment Process**

The LESA Site Assessment Process, which ostensibly includes a means by which to account for land use types around the proposed site, has also been addressed elsewhere in the Consumnes

## ATTACHMENT LU-216

Power Plant AFC. Further evaluation of land use around the proposed Cosumnes Power Plant site and pipeline route will include the following:

For areas within ¼-mile on each side of the proposed and alternative natural gas pipeline ROW, provide a map illustrating each of the following:

- a. General plan land use designations,
- b. Zoning ordinance designations, and
- c. Existing land use types.

Given the information already provided in the AFC and the above addendum that will be completed in response to the CEC data adequacy requests, completion of the LESA Site Assessment section would be completely redundant. A detailed land use map, such as is described above, provides the same information regarding land use designation and zoning as would be incorporated in the LESA accounting process. Indeed, inclusion of a map will better illustrate the nature of impacts to adjacent areas than the LESA scoring system.

Completion of the LESA process will not provide any significant benefit to understanding the environmental impacts of this project. With the exception of the permanent conversion of grazing land at the proposed Cosumnes Power Plant site, the project is not proposing to convert any agricultural lands to non-agricultural uses. For this reason, addition of the LESA requirement would be burdensome while not contributing to the protection of existing agricultural resources.

### Conclusion

The LESA process has been in existence for over two decades nationally, and nearly a decade in California, but has nonetheless not been typically used in recent power plant applications for certification in which CH2M HILL has been involved. Rather, in at least the majority of instances, satisfaction of data adequacy requirements has proven a sufficient step in securing CEC approval of power plant certification. A number of power plant AFCs have been successfully completed without inclusion of this redundant element. Indeed, in the data adequacy process it appears that the CEC already has a reasonable framework in which to address impacts to soils and agriculture. The unusual addition of the LESA process over this existing precedent appears excessive and unnecessary.

It is our belief that the information that comprises the LESA process is entirely contained within the existing AFC and proposed Land Use addendum that will be provided. It is argued that completion of the LESA analysis will not only be overly burdensome, but will produce little if any additional benefit in the expedient and complete evaluation of the environmental impacts of the Cosumnes Power Plant construction.

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

**Technical Area: Noise**

**Author:** Jim Buntin

**CPP Authors:**

**BACKGROUND**

Data Response #62 (Set 1C) stated that noise modeling results would be included in the AFC Supplement. The AFC Supplement dated March 15, 2002 indicates that noise levels due to plant operation will be reduced as compared to those described by the AFC although the noise analysis was not included.

**DATA REQUEST**

218. Please provide the revised noise analysis that reflects the revised noise projections described by the AFC Supplement. Include the specific analysis assumptions (i.e., the type and number of each noise generating equipment assumed in operation at the plant), state the assumed electric generating capacity (e.g., 500 MW or 1000 MW), and describe the factors that necessitated the revisions.

**Response:** A spreadsheet showing the modeling data is presented as Attachment NO-218.

**BACKGROUND**

Discussions during the site visit suggested that the mobile home on Clay East Road might be moved. If this were to occur, the noise analysis should be revised to describe potential impacts at the more distant residences.

**DATA REQUEST**

219. Please state whether the mobile home on Clay East Road will be relocated,. If the mobile home will be relocated, please identify when and where it will be located to and under what circumstances.

**Response:** The Applicant is currently in discussions with the property owner of the parcel on which the mobile home sits. It is likely that discussions will be resolved such that the mobile home will either be relocated or vacated and not used for a residence.

220. If the mobile home is to be relocated, please revise the noise analysis to address compliance with the noise standards at the subsequent nearest residences.

**Response:** A response to this data request will be submitted by May 6, 2002.

PLANT NOISE EMISSIONS MODEL - STEADY STATE BASE LOAD OPERATION

Cosumnes Power Plant  
Sacramento Municipal Utility District

RECEPTOR:	Nearest Homes East of Kirkwood Street	RECEPTOR X:	-1434 m
MODEL RUN:	2	RECEPTOR Y:	-371 m
RUN DATE:	2/26/2002	RECEPTOR Z:	2 m
MOVER TYPE:	GE 7FA		

PLANT TOTAL AT RECEPTOR:
41.7 dBA

SOURCE NUMBER	SOURCE DESCRIPTION	SOURCE QTY	SOURCE HGT, m	SOURCE TYPE	LOCATION X, m	LOCATION Y, m	SOURCE Lw dBA re 1 pW	RECEPTOR DISTANCE, m	EST. SHIELDING ATTENUATION	ESTIMATED DIRECTIVITY	NEAR FIELD GROUND ABS.	FAR FIELD GROUND ABS.	ANOMAL. ATTENUATION	ADDTL NOISE ABATEMENT	DISTANCE CORRECTION	AIR ABSORP. 15°C/70% RH	QTY CORR.	EXPECTED LEVEL AT RECEPTOR	Lp> 30
1	UNIT 1 GT TRANSFORMER	1	3	1	-105	13	102	1383	0	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	19	
2	UNIT 1 GT AIR INLET	1	15	1	-79	0	100	1404	0	-1	-3.4	-1.1	-5.2	0	-70.9	-3.0	0	15	
3	UNIT 1 GT AIR INLET PLENUM	1	5	1	-69	0	107	1414	-6	0	-3.5	-1.1	-5.2	0	-71.0	-3.0	0	17	
4	UNIT 1 COMBUSTION TURBINE ENCL.	1	6	2	-63	0	106	1420	-10	0	-3.5	-1.1	-5.2	0	-68.0	-3.0	0	15	
5	UNIT 1 TURB. ENCL. VENT FANS	2	10	1	-62	0	97	1421	-3	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	3	13	
6	UNIT 1 CT GENERATOR	1	5	1	-67	0	113	1416	-6	0	-3.5	-1.1	-5.2	0	-71.0	-3.0	0	23	
7	UNIT 1 CT LOAD COMPARTMENT	1	5	1	-68	0	106	1415	-8	0	-3.5	-1.1	-5.2	0	-71.0	-3.0	0	14	
8	UNIT 1 CT EXHAUST DIFFUSER	1	4	1	-59	0	108	1424	-14	0	-3.5	-1.1	-5.2	0	-71.1	-3.0	0	10	
9	UNIT 1 HRSG INLET SIDE	1	8	2	-50	0	108	1433	-4	-1	-3.5	-1.1	-5.3	0	-68.1	-3.0	0	22	
10	UNIT 1 HRSG SIDE WALL	1	12	2	-35	0	105	1447	-4	-2	-3.4	-1.1	-5.3	0	-68.2	-3.0	0	18	
11	UNIT 1 HRSG STACK (0° DIR.)	1	43	1	0	0	117	1481	0	-6	-3.3	-1.1	-5.4	0	-71.4	-3.1	0	26	
12	UNIT 1 HRSG STEAM LINES (EST.)	1	25	1	-38	0	100	1444	0	0	-3.4	-1.1	-5.3	0	-71.2	-3.0	0	16	
13	UNIT 1 BURNER CONTROL SKID	1	2	1	-10	8	110	1473	-17	0	-3.5	-1.1	-5.4	0	-71.3	-3.1	0	9	
14	UNIT 1 PIPE RACK STEAM LINES (EST)	1	18	1	-42	0	105	1441	-3	0	-3.4	-1.1	-5.3	0	-71.2	-3.0	0	18	
15	BOILER FEED PUMPS	3	2	1	-15	-173	109	1432	-16	0	-3.5	-1.1	-5.3	0	-71.1	-3.0	5	14	
16	UNIT 2 GT TRANSFORMER	1	3	1	-105	-29	102	1372	0	0	-3.5	-1.0	-5.1	0	-70.7	-2.9	0	19	
17	UNIT 2 GT AIR INLET	1	15	1	-79	-43	100	1394	0	-1	-3.4	-1.0	-5.1	0	-70.9	-2.9	0	16	
18	UNIT 2 GT AIR INLET PLENUM	1	5	1	-69	-43	107	1404	-6	0	-3.5	-1.0	-5.2	0	-70.9	-3.0	0	17	
19	UNIT 2 COMBUSTION TURBINE ENCL.	1	6	2	-63	-43	106	1410	-10	0	-3.5	-1.1	-5.2	0	-68.0	-3.0	0	15	
20	UNIT 2 TURB. ENCL. VENT FANS	1	10	1	-62	-43	97	1411	-3	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	0	10	
21	UNIT 2 CT GENERATOR	1	5	1	-67	-43	113	1406	-6	0	-3.5	-1.1	-5.2	0	-70.9	-3.0	0	23	
22	UNIT 2 CT LOAD COMPARTMENT	1	5	1	-68	-43	106	1405	-8	0	-3.5	-1.1	-5.2	0	-70.9	-3.0	0	14	
23	UNIT 2 CT EXHAUST DIFFUSER	1	4	1	-59	-43	108	1413	-14	0	-3.5	-1.1	-5.2	0	-71.0	-3.0	0	10	
24	UNIT 2 HRSG INLET SIDE	1	8	2	-50	-43	108	1422	-4	-1	-3.5	-1.1	-5.2	0	-68.0	-3.0	0	22	
25	UNIT 2 HRSG SIDE WALL	1	12	2	-35	-43	105	1437	-4	-2	-3.4	-1.1	-5.3	0	-68.1	-3.0	0	18	
26	UNIT 2 HRSG STACK (0° DIR.)	1	43	1	0	-43	117	1471	0	-6	-3.3	-1.1	-5.4	0	-71.3	-3.1	0	27	
27	UNIT 2 HRSG STEAM LINES (EST.)	1	25	1	-38	-43	100	1434	0	0	-3.4	-1.1	-5.3	0	-71.1	-3.0	0	16	
28	UNIT 2 BURNER CONTROL SKID	1	2	1	-10	34	110	1480	-17	0	-3.5	-1.1	-5.4	0	-71.4	-3.1	0	8	
29	UNIT 2 PIPE RACK STEAM LINES (EST)	1	18	1	-42	-42	105	1431	-3	0	-3.4	-1.1	-5.3	0	-71.1	-3.0	0	18	
30	BOILER FEED PUMPS	3	2	1	-15	-130	109	1439	-16	0	-3.5	-1.1	-5.3	0	-71.1	-3.0	5	14	
31	UNIT 3 GT TRANSFORMER	1	3	1	-105	-103	102	1356	0	0	-3.5	-1.0	-5.0	0	-70.6	-2.9	0	19	
32	UNIT 3 GT AIR INLET	1	14	1	-79	-116	100	1378	0	-1	-3.4	-1.0	-5.1	0	-70.8	-2.9	0	16	
33	UNIT 3 GT AIR INLET PLENUM	1	5	1	-69	-116	107	1388	-4	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	20	
34	UNIT 3 COMBUSTION TURBINE ENCL.	1	6	2	-63	-116	106	1394	-5	0	-3.5	-1.0	-5.1	0	-67.9	-2.9	0	21	
35	UNIT 3 TURB. ENCL. VENT FANS	2	10	1	-62	-116	97	1395	-3	0	-3.4	-1.0	-5.1	0	-70.9	-3.0	3	14	
36	UNIT 3 CT GENERATOR (2)	1	5	1	-67	-116	113	1390	-4	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	26	
37	UNIT 3 CT LOAD COMPARTMENT (2)	1	5	1	-68	-116	106	1389	-5	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	18	
38	UNIT 3 CT EXHAUST DIFFUSER (2)	1	4	1	-59	-116	108	1398	-6	0	-3.5	-1.0	-5.1	0	-70.9	-3.0	0	18	
39	UNIT 3 HRSG INLET SIDE	1	8	2	-50	-116	108	1407	0	-1	-3.5	-1.1	-5.2	0	-67.9	-3.0	0	26	
40	UNIT 3 HRSG SIDE WALL	1	12	2	-35	-116	105	1422	0	-2	-3.4	-1.1	-5.2	0	-68.0	-3.0	0	22	
41	UNIT 3 HRSG STACK (0° DIR.)	1	43	1	0	-116	117	1456	0	-6	-3.3	-1.1	-5.4	0	-71.2	-3.1	0	27	
42	UNIT 3 HRSG STEAM LINES (EST.)	1	25	1	-38	-116	100	1419	0	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	0	16	
43	UNIT 3 BURNER CONTROL SKID	1	2	1	-10	-124	110	1445	-15	0	-3.5	-1.1	-5.3	0	-71.2	-3.0	0	11	
44	UNIT 3 PIPE RACK STEAM LINES (EST)	1	18	1	-42	-116	105	1416	-1	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	0	20	
45	BOILER FEED PUMPS	3	2	1	-15	-29	109	1459	-16	0	-3.5	-1.1	-5.4	0	-71.3	-3.1	5	14	
46	Unit 4 GT TRANSFORMER	1	3	1	-105	-145	102	1348	0	0	-3.5	-1.0	-5.0	0	-70.6	-2.9	0	19	
47	Unit 4 GT AIR INLET	1	14	1	-79	-159	100	1371	0	-1	-3.4	-1.0	-5.1	0	-70.7	-2.9	0	16	
48	Unit 4 GT AIR INLET PLENUM	1	5	1	-69	-159	107	1381	-4	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	20	
49	Unit 4 COMBUSTION TURBINE ENCL. (	1	6	2	-63	-159	106	1387	-5	0	-3.5	-1.0	-5.1	0	-67.8	-2.9	0	21	
50	Unit 4 TURB. ENCL. VENT FANS	2	10	1	-62	-159	97	1388	-3	0	-3.4	-1.0	-5.1	0	-70.8	-2.9	3	14	
51	Unit 4 CT GENERATOR (2)	1	5	1	-67	-159	113	1383	-4	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	26	
52	Unit 4 CT LOAD COMPARTMENT (2)	1	5	1	-68	-159	106	1382	-5	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	18	
53	Unit 4 CT EXHAUST DIFFUSER (2)	1	4	1	-59	-159	108	1391	-6	0	-3.5	-1.0	-5.1	0	-70.8	-2.9	0	19	
54	Unit 4 HRSG INLET SIDE	1	8	2	-50	-159	108	1400	0	-1	-3.5	-1.0	-5.2	0	-67.9	-3.0	0	26	
55	Unit 4 HRSG SIDE WALL	1	12	2	-35	-159	105	1415	0	-2	-3.4	-1.1	-5.2	0	-68.0	-3.0	0	22	
56	Unit 4 HRSG STACK (0° DIR.)	1	43	1	0	-159	117	1449	0	-6	-3.3	-1.1	-5.3	0	-71.2	-3.1	0	27	
57	Unit 4 HRSG STEAM LINES (EST.)	1	25	1	-38	-159	100	1412	0	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	0	16	
58	Unit 4 BURNER CONTROL SKID	1	2	1	-10	-167	110	1438	-15	0	-3.5	-1.1	-5.3	0	-71.1	-3.0	0	11	
59	Unit 4 PIPE RACK STEAM LINES (EST.)	1	18	1	-42	-158	105	1408	-1	0	-3.4	-1.1	-5.2	0	-71.0	-3.0	0	20	
60	BOILER FEED PUMPS	3	2	1	-15	14	109	1470	-16	0	-3.5	-1.1	-5.4	0	-71.3	-3.1	5	13	
61	ST 1 ENCLOSURE	1	13	1	-46	60	109	1454	0	-3	-3.4	-1.1	-5.3	0	-71.2	-3.1	0	22	
62	STG 1 ENCLOSURE	1	13	1	-46	69	105	1456	0	-1	-3.4	-1.1	-5.4	0	-71.2	-3.1	0	20	
63	CONDENSER AREA 1 - E SIDE	1	9	2	-39	53	113	1458	-2	-20	-3.5	-1.1	-5.4	0	-68.2	-3.1	0	10	
64	CONDENSER AREA 1 - S SIDE	1	9	2	-46	43	111	1449	0	0	-3.5	-1.1	-5.3	0	-68.2	-3.1	0	30	
65	CONDENSER AREA 1 - W SIDE	1	9	2	-54	53	116	1444	-9	0	-3.5	-1.1	-5.3	0	-68.2	-3.0	0	26	
66	CONDENSER AREA 1 - N SIDE	1	9	2	-46	67	113	1456	-4	-16	-3.5	-1.1	-5.4	0	-68.2	-3.1	0	12	

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

**Technical Area: Project Description**

**Author:** Kristy Chew

**CPP Authors:**

**BACKGROUND**

Data Response 69 (Set 1A) states that two natural gas compressor stations will be required for the second 500 MW of the proposed project (Phase 2), one at 27700B County Road 29 in Winters and one near the Carson Ice-Gen Plant in Elk Grove.

**DATA REQUEST**

221. Please provide a supplement to the AFC that fully describes the setting and assesses the impacts of the natural gas compressor stations for all technical areas that may be affected.

**Response:** AFC Supplement B is being filed on April 15, 2002 under separate cover.

222. Please provide a list of property owners and mailing addresses within 1000-feet of the proposed compressor station locations.

**Response:** A list of property owners and mailing addressed of those within 1000 feet of the compressor stations is provided in Appendix 1A of Supplement B.

**BACKGROUND**

Conversations with staff indicate that the natural gas pipeline alignment has been altered from what is stated in the application for certification to avoid biological resources.

**DATA REQUEST**

223. Please provide revised maps of the alignment for those areas where the alignment has been altered from what is presented in the AFC.

**Response:** The only change in the overall pipeline alignment is on AFC Figure 6.1-4 (Map 3 of 6). That figure shows the gas line alignment going along Core Road to the center of Section 24, then turning south to Eschinger Road. The proposed change is to have the gas line head south 0.5 mile sooner. So it would follow the Core Road alignment to the east edge of Section 23, then turn south to Eschinger Road. A revised figure (Figure 6.1-4R) showing the new alignment is attached.

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

**INSERT FIGURE 6.1-4R (MAP 3 OF 6)**

**Technical Area: Traffic and Transportation**

**Author:** James Fore

**CPP Authors:**

**BACKGROUND**

The California Department of Transportation indicated that State Route 104 from State Route 99 to Clay East Road is not adequately built to serve a large number of heavy weighted trucks without substructure upgrades (letter docketed on February 27, 2002).

The Herald Fire Protection District commented in a letter docketed December 7, 2001, that Clay East Road was usable only because of the current minimum traffic volume. The District is concerned that the increase in traffic volume caused by the CPP project construction traffic, (i.e., trips associated with the daily workforce and heavy-weighted trucks), would lead to significant deterioration of Clay East Road.

Page 8.10-12 of the AFC states that SMUD is considering the use of an existing rail spur that enters the Rancho Seco Plant for the shipment of heavy equipment.

**DATA REQUEST**

224. Please indicate the routes to be used for the heavy-weighted trucks and the maximum weight expected for the loads.

**Response:** The construction route proposed is to use SR 104 (Twin Cities Road) to the Rancho Seco Park entrance. The maximum weight load would not exceed the Caltrans weight restrictions specified in California Vehicle Code Sections 35550 to 35559. The maximum weight would not exceed 20,000 pounds for any vehicle-axle and the gross weight will not exceed 10,500 pounds for any one wheel. Vehicles with trailers will not exceed 18,000 pounds and the gross weight on any one wheel will not exceed 9,500 pounds. These limitations are applicable to all Caltrans state and local roadways. For loads in excess of these weight restrictions, the existing Rancho Seco Plant rail spur would be used to transport these loads. This railspur goes into the Rancho Seco Plant and would be transported on the existing Rancho Seco Plant roads, therefore eliminating any negative affect on the public roadways.

225. Please indicate how the applicant determined that the roadways and their associated substructures were sufficient to handle the increased construction traffic without having a significant negative affect on the roadway.

**Response:** All construction vehicles would use state-maintained roads for which Caltrans has appropriate weight standards based on California Vehicle Code Sections 35550 to 35559. See Data Response #224 for specific weight limitations. None of these limitations will be exceeded. These roads were used

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

for the construction of SMUD's Rancho Seco plant, and therefore, SMUD does not expect significant negative impacts to the roadway.

226. Has SMUD determined whether the existing Rancho Seco rail spur will be used for the delivery of heavy equipment? If yes, then please describe under which circumstances the spur would be used, how often it would be used.

**Response:** SMUD has agreed to use the existing Rancho Seco rail spur to handle loads that exceed California weight limitations. This rail spur goes into the existing Rancho Seco Plant where loads would be off-loaded onto a low-boy trailer and from there would be transported within the Rancho Seco Plant's internal roads, thereby eliminating heavy equipment from using state roads. SMUD has estimated that the HRSG would come in 12 to 20 shipments combustion turbine and steam turbine would take about 6 shipments. Therefore, about 26 shipments would come by rail. Therefore, it is expected that rail shipments would be used 26 days for each phase of construction.

227. Please indicate the precautions and mitigation measures the applicant would put in place to minimize roadway damage from heavy loads.

**Response:** To minimize the heavy loads on the roadways, SMUD has agreed to use the existing Rancho Seco rail spur. This rail spur goes into the existing Rancho Seco Plant and from there would be transported within the Rancho Seco Plant roads, thereby eliminate heavy equipment being transported on the state roads and the possible negative affect they would have on these facilities.

## BACKGROUND

The local school districts, Arcohe Union Elementary School and Galt Joint Union High School Districts, have school bus routes that use both Twin Cities and Clay East Roads. In the November 13, 2001 data adequacy supplement the applicant indicated that both Clay East Road and Twin Cities Road have little or no shoulders. This has caused concern about the safety of school students being picked up and let off during periods of heavy construction traffic.

## DATA REQUEST

228. Please indicate the mitigation measures that will be taken by the CPP to ensure that construction traffic will not reduce student safety.

**Response:** A possible mitigation under evaluation to SMUD is to reroute construction-related vehicles along Twin Cities Road to the Rancho Seco Park entrance. Within Rancho Seco Park, construction vehicles will turn south near the entrance to proceed along the new construction access road for about 0.5 mile to the intersection with Clay East Road, then turn west and proceed briefly along



COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

this portion of Clay East Road to the plant site. This option eliminates the school-related safety concerns along Clay East Road. It is anticipated that this construction access road will be operational by the time preparatory site work is completed. For a detailed discussion of this refer to AFC Supplement B.

**Technical Area: Waste Management**

**Author:** Alvin Greenberg, Ph.D.

**CPP Authors:**

**BACKGROUND**

Recent correspondence (see attached letter from February 5, 2002) and conversations with the Department of Toxic Substances Control (DTSC) indicate a Phase I Environmental Site Assessment (ESA) for the entire length of the natural gas pipeline alignment is required.

**DATA REQUEST**

229. Please provide a complete Phase I ESA for the 26-mile gas pipeline corridor and natural gas compressor stations according to ASTM 2000 guidelines.

**Response:** As stated in the letter dated April 15, 2002, the Applicant objects to this data request as unnecessary and burdensome. In addition, at the January 24, 2002 workshop it was agreed by CEC staff that this was unnecessary.

**BACKGROUND**

The Phase I Environmental Site Assessment for the power plant site and construction laydown areas prepared by Taylor, Hooper & Wiley and submitted by SMUD as part of Data Response Set 2C (March 19, 2002) is not complete. No conclusion or recommendation was provided nor was an adequate discussion provided concerning the potential for impacts that the construction or operation of Rancho Seco Nuclear Power Plant could have had on the 30-acre site or laydown area. DTSC, along with Energy Commission staff, has concerns that waste materials, including radioactive wastes, may have migrated onto the site or laydown area.

DTSC and the Energy Commission understand that the Nuclear Regulatory Commission (NRC) is responsible for licensing nuclear facilities and maintains regulatory responsibility for activities conducted within the licensed areas. The Department of Health Services (DHS) holds jurisdiction for radioactive waste/material activities outside of the NRC's license domain.

**DATA REQUEST**

230. Please prepare and implement a Sampling and Analysis Plan for the site and laydown areas. This plan should also include a survey and results for the presence of radioactive materials. Please submit this Plan along with an Implementation Schedule to Energy Commission staff and DTSC for review and approval prior to implementation.

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

**Response:** As stated in the letter dated April 15, 2002, the Applicant objects to preparing a Sampling and Analysis Plan since the Phase I Environmental Site Assessment concludes that additional sampling is not required. A copy of the revised the Phase I Environmental Site Assessment addressing those deficiencies noted in the background statement is included with this submission as Attachment WM-183R.

231. Please provide a schedule for the decommissioning of the Rancho Seco Nuclear Power Plant. Please also include what steps will be taken to prevent migration of any hazardous wastes, including radioactive wastes, from Rancho Seco to the proposed Cosumnes Power Plant site and laydown areas. Also list the number of truck trips removing hazardous or radioactive wastes from Rancho Seco if these trips will occur during CPP site preparation and operations.

**Response:** A response to this data request will be submitted by May 6, 2002.

232. Please provide a description and area map of Rancho Seco's Nuclear Regulatory Commission licensed boundaries and buffer zones.

**Response:** A response to this data request will be submitted by May 6, 2002.

**Attachment WM-183R**

**Phase I Environmental Site Assessment**

Revision 1

**Cosumnes Power Plant  
and  
Associated Infrastructure**

*Prepared by*

B. Demar Hooper, Esq.,  
State of California Registered Environmental Assessor, Class I REA-02828  
Taylor, Hooper & Wiley, A California Corporation

revised: April 12, 2002

## **Introduction**

This Phase I Environmental Site Assessment (ESA) examines six sites:

- three Transmission Line poles occupying a total of about 0.3 acres of temporarily disturbed land, and less than 0.1 acre of permanently disturbed land;
- a 30-acre site for the Cosumnes Power Plant (CPP), a natural gas-fired power plant;
- a Water Pipeline connecting the existing Rancho Seco Plant (RSP) raw water supply to the CPP site temporarily disturbing a 75± foot wide corridor about 1500 feet long;
- a 20-acre Proposed Laydown site, which will be temporarily cleared and prepared to hold materials to be used in construction of the CPP; and

Collectively, these features are described as the CPP sites. Specific reference to the proposed power plant is indicated by use of the singular "Site."

The CPP Site is located on the north side of Clay East Road, about 50 feet east of the existing transmission lines. The proposed transmission line poles and water pipeline extend north from the CPP Site. The Proposed Laydown is immediately south of the CPP Site, on the south side of Clay East Road. Figure 1 illustrates the proposed layout of the CPP sites including labeling of manmade and environmental features overlaid on an aerial photograph of the project area.

### **1. Data Pursuant to ASTM Standard E 1527.**

Attached is the VISTA Information Solutions Report (VISTA Report) for the CPP sites. The singular feature identified near the CPP sites is the Rancho Seco Plant (RSP), (technically, the CPP Sites are all within the boundary of Rancho Seco) which is identified as being listed on the California equivalent Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) list. RSP is also a registered generator of hazardous waste.

### **2. Data Obtained from Site Visit.**

The CPP sites were inspected on February 27, 2002. Orientation was based on use of an aerial photo, and by reference to recently placed survey stakes marking the corners of the sites and the pipeline and transmission line alignments.

There was evidence of recent grazing use, and of very occasional light traffic, particularly along the right-of-way of the PG&E transmission lines. An empty circular concrete cattle-watering trough was noted near the western edge of the Proposed Laydown site. Based on the pipe connection with automatic shutoff valve, it appeared that the trough was served by some type of underground water supply. There was no evidence at any of the CPP sites of uses other than grazing, including agricultural. Nor was there evidence of any

recent plowing or disking that might have been associated with increased productivity for grazing. The site inspection also revealed no concentrations or accumulations of animal waste.

Several features near the CPP sites are worthy of note, and are discussed below based on information from personal interviews. First, Clay Creek flows from east to west just north of the CPP Site, crossing the proposed Water Pipeline corridor. While passing close to the proposed Transmission Line poles and the CPP site, the creek does not touch anything other than the proposed Water Pipeline corridor. Second, north of Clay Creek, the land rises to a gently sloping hill just south of the existing Rancho Seco Plant. Atop the hill is a concrete pad roughly 300 square feet in area. Third, there is a cattle feedlot facility southwest of the CPP sites on the south side of Clay East Road. The feedlot is located on a parcel of land just southwest of the CPP Plant site, across Clay East Road (APN: 140-0050-012) SMUD also shares a north-south property line with the same land parcel. Based on the elevations at the feedlot location, drainage flows north and west toward Clay Creek.

### **3. Personal Interviews.**

Interviews were arranged through SMUD to speak with long-term RSP employees who had knowledge of the CPP sites during and even before construction of Rancho Seco. Interviews occurred on February 27, 2001. Interviewees were Jerry Delezenski, Mike Hieronimus, Bill Wilson, and Roy Marciel. Historic familiarity with the CPP sites ranged from 40 years for Mr. Marciel to about 30 years for Messrs. Hieronimus and Wilson, to 18 years for Mr. Delezenski. Information from the interviews is grouped by subject area below.

#### Grazing

All four interviewees had observed grazing on the CPP sites, although more frequently on the CPP site. Along with the presence of cattle, some of the interviewees remembered infrequent visits by pickup trucks, usually during wintertime, and particularly during dry winters, dropping hay for cattle. They did not recollect any particular stopping place or travel route that might have resulted in any cumulative accumulation of petrochemicals associated with vehicles (gasoline, oil, grease, etc.). According to the interviewees, cattle were rotated on and off the property at a frequency that allowed continued growth of forage, and they observed that there was never a concentration of cattle, which might have led to nitrate accumulations from cattle waste. None of the interviewees recalled ever seeing plowing or disking of the fields, either for cropping or simply for aeration of the rangeland. More specifically, none of the interviewees ever observed the application of fertilizers or pesticides, either from tractors or by hand application. Mr. Marciel recalls that there were occasions when some governmental entity sprayed roadside ditches along Clay East Road. That did not occur, however, until well after the road was paved, which would have been into the 1970s. By that time, the Sacramento-Yolo County Mosquito Abatement

District, if it was spraying for mosquito control, was no longer using DDT or other bio-accumulating pesticides. Herbicide spraying may have occurred periodically for one of several reasons — for example, fire control or assuring proper drainage flow. Based on vigorous vegetation observed along Clay East Road during the site inspection, there is no reason to believe that herbicides have bio-accumulated. For clarification, Clay East Road is not part of any of the CPP sites that are the subject of this investigation. All properties are setback at least 20 feet from the road.

#### Cattle Feedlot Operation

According to Messrs. Marciel and Wilson, between about 1965 and 1967, a feedlot was constructed at its existing location (14150 Clay East Road). It operated from the late 1960s until the late 1970s. Mr. Wilson recalled that during the approximate period of 1974-75, the feedlot operation resulted in nutrient-laden runoff west of the CPP sites. The elevation gradient would move that runoff away from the CPP sites, and if any reached Clay Creek, runoff would move directly west from the sites. In the intervening 30± years since the feedlot was last in operation, any accumulation of nitrates or nitrites likely dissipated, but in no conceivable circumstance would accumulations migrate to any of the CPP sites.

#### Stock Watering Water Supply.

Mr. Marciel moved to the vicinity in 1962, and occupied (and still lives in) a farmhouse near the Rancho Seco Plant fronting on Clay East Road. Mr. Marciel confirmed that the concrete watering trough was served by an underground 1.5-inch diameter flexible plastic water pipe that he helped install over 30 years ago. The pipe was buried about 1-1.5 feet deep and ran from the pump at the farmhouse north and east of the CPP sites to cross Clay Creek and Clay East Road. From there it turned to an east-west alignment just south of the existing transmission lines that cross the Proposed Laydown site. The pipe served about four troughs, including the trough on the Proposed Laydown site. The pipe is a flexible plastic (probably PVC), and there is no known aspect of the water supply that raises a risk of contamination of any kind.

#### The Hilltop Concrete Pad

All four interviewees either knew or had been told that the concrete pad was associated with a small outbuilding that served an adjacent radio transmission tower. Mr. Wilson remembered that the radio station was KRAK. Mr. Marciel also recalled that KRAK transmitted from the tower until shortly before construction of Rancho Seco. By the early 1970s, only the concrete pad remained above ground. Mr. Marciel also recalled, however, that there was a network of small gauge copper wire buried just below the surface surrounding the radio tower, and about 50 acres in area. It is possible that remnants of this wire network may be discovered in trenching for the water pipeline. It seems unlikely that the network would have crossed Clay Creek, which is between the former radio tower and the proposed CPP site.

### Miscellaneous Observations

None of the interviewees was aware of any historic or recent uses of any of the CPP sites that could have resulted in chemical, biological, radioactive or any other type of contamination. Mr. Wilson, who is now a contractor to SMUD working with Rancho Seco decommissioning, was until 2001, the Radiation Protection Manager. In that capacity, he recalls that radiological testing occurred in January 2001 to investigate the presence and level of radioactivity throughout the Rancho Seco site. The testing included sampling at the proposed CPP site. Although results have not yet been published, Mr. Wilson recalled that the testing showed nothing higher than background radiation levels.

### Conclusions and Recommendation

This Phase I ESA identified no areas of environmental concern warranting further investigation. There is no evidence of past or present contamination, either above or below ground. Personal interview results covered an extensive historical period and provided cumulatively consistent accounts. Based on these conclusions, the preparer recommends no further testing or analysis.



**Insert Figure 1**

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DATA RESPONSES, SET 3A

**Technical Area: Water and Soil Resources**

**Author:** Philip Lowe, P.E., Greg Peterson, P.E., and Richard Latteri

**CPP Authors:**

These Water and Soil Resources Data Requests are a follow-up to the data response sets and AFC supplement listed below:

Set 1A, dated January 9, 2002;  
Set 1B, dated January 18, 2002;  
Set 1C, dated February 4, 2002;  
Set 1D, dated February 15, 2002;  
Set 1G, dated March 19, 2002; and  
AFC Supplement A, dated March 15, 2002

Follow-up data requests for Data Response Set 1E, Power Plant Cooling Analysis, are being deferred until the analysis of the data can be completed. If follow-up is deemed necessary, another set of data requests will be submitted. In order to reduce the number of future data requests, data responses provided by the applicant need to have sufficient detail to validate the bases, assumptions, quantities, unit processes, and cost components therein.

**BACKGROUND**

As part of the National Pollutant Discharge Elimination System (NPDES) permitting process, a Report of Waste Discharge (ROWD) is necessary to evaluate and support the proposed wastewater treatment and management for the CPP. The Central Valley Regional Water Quality Control Board (CVRWQCB) in their letter to Mr. Colin Taylor dated February 25, 2002, deemed the initial NPDES application as incomplete requiring additional information including a revised ROWD.

**DATA REQUEST**

233. Please provide a schedule for submittal of a complete NPDES application to the CVRWQCB.

**Response:** An application for NPDES permit was filed with the RWQCB on February 24, 2002. The RWQCB issued a letter on February 25, 2002, indicating the application was incomplete, but included only a letter commenting on the AFC. According to Mr. Lincoln King (pers. comm. with EJ Koford April 11, 2002), the RWQCB has not yet prepared a list of items that are lacking to make the NPDES application complete. The Applicant has scheduled a meeting for the week of April 15, 2002, at which the RWQCB is expected to identify the data that are missing from the NPDES application.

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

234. Please provide a copy of the complete NPDES application including written verification from the CVRWQCB that all additional data it needs has been received.

**Response:** Please see response to Data Request #233.

235. Please provide a copy of the accepted ROWD that includes discharge characteristics for both the Folsom South Canal as the primary water source, Rancho Seco Reservoir as the backup source, and all receiving water characteristics.

**Response:** This document has not been issued by the RWQCB at this time. The Applicant will provide it when available.

## BACKGROUND

Data Requests 123 and 124 requested background information on the historic Rancho Seco Plant (RSP) discharge and downstream receiving waters. The response in Set 1A provided summary information on RSP “wastewater” discharge flow but said that no information was readily available for Hadselville Creek, Laguna Creek, or the Cosumnes River. Data Response 123 in Set 1A did not provide hydrologic or water quality data for Hadselville Creek, Laguna Creek, or the Cosumnes River.

Data Response Table W&SR-124 provided in Set 1A lists the discharge rates from RSP to Clay Creek but provides no water quality data for Clay Creek. The response that “November to March stormwater runoff flows will probably make the unnamed Clay Creek tributary flow slightly higher” is not an adequate response.

At the January 23, 2002, data response workshop, the applicant stated that supplemental dilution water will come from the Folsom-South Canal but the quantity and point of discharge to Clay Creek was not known. Staff’s February 15, 2002, site visit showed that flow charts at the Folsom-South Canal Pump Station indicated greater water use than reported in Data Response 123 Table W&SR-123.

## DATA REQUEST

236. Please provide a detailed discussion of the relative contribution of CPP discharge on Clay Creek, Hadselville Creek, and the Cosumnes River by season including the effect on water quality for those waterways. Include in this discussion, information on daily and annual constituent loading to those waterways.

**Response:** As stated in the letter dated April 15, 2002, the Applicant objects to this data request because it is not clear what information CEC staff are seeking.

237. Please provide representative flow records for the Folsom-South Canal Pump Station and all other applicable flow metering points within the RSP.

**Response:** As stated in the letter dated April 15, 2002, the Applicant objects to this data request because it is not clear what information CEC staff are seeking.

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

However, we are providing a letter dated February 13, 2002, from Donald Saddoris of Arden Cordova Water Service indicting its support for SMUD's use of its water rights.

## **BACKGROUND**

Data Request 151 requested historic annual consumption by month and yearly total of U.S Bureau of Reclamation/Central Valley Project (USBR/CVP) water used for RSP operation from date of commercial operation until the year 2000. Data Response 151 in Set 1C provides Table W&SR-151 which shows that the average water delivered by the USBR to the Rancho Seco Pump Station averaged 19.5 cfs from 1999 to 2001, or 60% greater than the 12.26 cfs average reported RSP discharge shown in Table W&SR-124.

## **DATA REQUEST**

238. Please explain the discrepancy between the 19.5 cfs and 12.26 cfs values.

**Response:** As stated in the letter dated April 15, 2002, the Applicant objects to this data request because it is not clear what information CEC staff are seeking.

239. What will be the discharge requirements for RSP after all fuel rods are placed in dry storage and when is this expected to occur?

**Response:** As stated in the letter dated April 15, 2002, the Applicant objects to this data request because it is not clear what information CEC staff are seeking.

## **BACKGROUND**

Data Response 155 in Set 1A indicates that the condenser will be cleaned as need, potentially as often as weekly, and that tube cleaning will include both plastic and metal scrapers and brushes forced through the tubes with a combination of plant service water and compressed air. The tube sheet will be cleaned using either pressurized plant service water or by hand with a pick or rake. The cleaning water will be returned to the cooling tower basin.

The CVRWQCB in their January 29, 2002, letter indicated that Zero Liquid Discharge (ZLD) is considered best practicable treatment (BPT) regardless of the water source. Since condenser cleaning solutions are a common source of elevated copper, mercury and other metals, how those constituents are controlled in the cooling loop and discarded in a ZLD system needs to be discussed.

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

**DATA REQUEST**

240. Based on CVRWQCB's determination that ZLD is BPT, please provide the chemical quality of the resulting salt cake and its ultimate disposal method.

**Response:** As stated in the letter dated April 15, 2002, the Applicant objects to the background statement. Therefore, it is not clear what information CEC staff are seeking.

**BACKGROUND**

On November 12, 2001, a Well Drillers Inspection Request was provided to the applicant by facsimile. To date, no well data within the vicinity of the CPP site has been provided.

**DATA REQUEST**

241. Please provide at least 10 representative well logs within a 2 mile radius of CPP including estimated yield, quality, and water level.

**Response:** A response to this data request will be submitted by May 6, 2002.

242. Figure 8.15-2 is too generalized and does not provide adequate detail. Please provide geomorphic strata and groundwater depths within the hydrologic area; specifically at the plant site.

**Response:** A response to this data request will be submitted by May 6, 2002.

**BACKGROUND**

As originally proposed by the applicant in the AFC, the CPP site configuration will require alteration to the upper reaches of Clay Creek. In the revised general site arrangement contained in AFC Supplement A, the size and shape of the CPP footprint remains the same with the same streambed alterations to the upper reaches of Clay Creek.

As with the originally proposed site arrangement, the revised arrangement as shown in Figure 2.2-1R and Figure 8.14-4R locates the septic leach field adjacent to and up slope of the creek and hazardous materials and or potential contaminant storage areas adjacent to the creek. All of those facilities have the potential to significantly degrade water quality in the event of an embankment failure or as a result of a spill. No information has been provided discussing alternate site configurations that may avoid possible impacts.

## DATA REQUEST

243. Please provide an analysis of alternate site configurations that fully discusses and compares the reduced risks and efficiencies gained of the currently proposed configuration as compared to configurations that:
- place all potential contaminant sources (septic system, chemical storage, treatment systems, etc.) at the furthestmost point from the creek;
  - place all potential contaminant sources to the furthestmost point from the creek and layout the site so as not to require any alteration or filling of the existing drainages and upper reaches of the creek; and
  - place all potential contaminant sources at the furthestmost point from the creek, does not require any alteration or filling of the existing drainages and upper reaches of the creek, and with a 100 foot setback from the edge of the creek to the toe of the site.

**Response:** At the time the preliminary configuration and subsequent general arrangement was laid out, the engineering team considered all applicable laws, ordinances, regulations and standards (LORS), and applied these to best engineering practices for the plant layout. Location of potential contaminant sources, including the septic system, chemical storage, and treatment systems were considered. The septic leach field has been relocated from outside the north fenceline of CPP to inside the CPP fenceline just west of the warehouse. This is currently the best location that will not interfere with construction of Phase 2 or operations and maintenance of Phase 1. The ammonia tank is located at the northern side of the plant boundary to be as far away from public receptors as possible and ensure compliance with LORS. The D.I. and water treatment building was moved westward toward the middle of the plant. This is the best location, as it accommodates both construction phases, and is moved westward as much as practicable while still accommodating plant operations. Cooling tower chemical storage is required to be as close as practicable to the cooling towers to minimize environmental concerns. Shortening the length of chemical lines minimizes the chance of line leakage. The cooling towers were located on the east side of the plant since prevailing winds are from west to east. This also avoids having cooling towers near existing transmission lines.

In summary, the current general arrangement contains the optimum layout and equipment placement designed to: a) minimize environmental impact; b) meet all applicable laws, ordinances, regulations and standards; c) achieve best engineering practices for design and construction of both plant phases, and d) accommodate future operation and maintenance of the plant. The Applicant is available to address specific concerns that do not meet LORS. Being the

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

optimum layout for all considerations, the Applicant is unable to further improve upon the site arrangement without impacting other considerations.

## BACKGROUND

Data Requests 118, 119, 120, 121, and 122 requested a draft Storm Water Pollution Prevention Plan (SWPPP) and draft erosion control and sedimentation plan. The responses provided in Set 1C and AFC Supplement A included a preliminary draft SWPPP and a new site plan. The preliminary draft SWPPP is inadequate and does not apply to the new site configuration as noted in Data Response 118, which states that the draft SWPPP is to be revised once the new grading plan is received.

Data Requests 133 and 134 requested hydrologic calculations and a hydrologic reservoir routing analysis for the proposed stormwater detention basin. Data Responses 133 and 134 in Set 1A and Set 1B provided rough hydrologic calculations and a rough estimate of the volume required for the stormwater detention basin but no information was provided on the proposed storage/outflow characteristics of the basin. Hydrologic reservoir routing is typically based on an inflow hydrograph, the basin geometry, and outflow characteristics. No hydrologic reservoir routing was provided.

Data Request 136 requested analysis of other return periods, plus a conceptual spillway design. Data Response 136 in Set 1C states that “the Applicant will attempt to move this item up in the design queue.” To date, no information has been provided for Data Request 136.

Data Request 138 requested proposed and existing contours on grading plans to include drainage features and the laydown areas. The figure should distinguish those areas that will be routed to the blow-down treatment systems, the stormwater detention basin, and other areas as initially requested. At the meeting on January 9, 2002, the applicant committed to providing a response to this request. Areas to be routed to the blow-down treatment systems are not yet described.

## DATA REQUEST

244. Please provide the revised draft plans (grading, erosion control & sedimentation, and SWPPP) as initially requested in Data Requests 118 through 122.

**Response:** A response to this data request will be submitted by May 6, 2002.

245. Please provide a conceptual stage/storage/outflow relationship for the proposed stormwater detention basin with a hydrologic reservoir routing based on an inflow hydrograph, the detention basin geometry, and stage/storage/outflow characteristics.

**Response:** The Applicant is trying to determine if we have enough data to respond to these questions. We'll provide an update on May 6, 2002.

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

246. Please provide a stormwater management design that complies with all requirements of the CVRWQCB and Sacramento County. If the original design exceeds those requirements, please provide a detailed discussion of the exceedences.

**Response:** The Applicant is trying to determine if we have enough data to respond to these questions. We'll provide an update on May 6, 2002.

## BACKGROUND

Data Requests 143, 144, 145, and 146 requested hydrologic and hydraulic documentation of the flood conditions that would be experienced by the CPP site.

Data Response 143 through 146 in Set 1G provided a hydrologic and hydraulic analysis that is adequate for existing conditions on Clay Creek but no information is provided for tributaries to Clay Creek, which are to be diverted by the CPP site. Some additional clarification is needed. Specifically, the Clay Creek 100-Year Discharge Analysis Report states that a portion of the CPP site is within the Clay Creek floodplain but no map showing the location of this flood-prone area is provided.

With regard to tributary flows, the site plan shows two tributaries that would be diverted by the project. Since the entire flow for those tributaries will be diverted, it is not necessary to map the 100-year floodplain through the property for those tributaries. However, the environmental evaluation should include an estimate of the magnitude of those discharges and a preliminary description of the collecting structures and diversion pipes in order to assess whether these flows can safely be collected and diverted without overflowing into portions of the project site not designed to accept this flow.

The report states that 100-year flow velocities adjacent to the proposed banks of the facility are low, and with good engineering and erosion control (vegetation), the slopes surrounding the facility can adequately protect the facility from being eroded, undermined or over-run. However, no information is provided on post-development flow velocities at locations where the proposed facility (which includes the proposed stormwater detention basin) would encroach into the floodplain. Without post-development flow velocity information it is difficult to determine whether vegetative treatment of these slopes will be adequate as erosion control or whether non-erosive armoring (such as riprap) may be necessary.

The report further states that the project will be elevated by grading to be above the 100-year flood elevation of Clay Creek. Although this is a commonly-accepted method of flood protection, in this case it also involves filling and diverting one of the tributaries of Clay Creek which results in impacts to waters under the jurisdiction of the U.S. Army Corps of Engineers and the California Department of Fish and Game. The Corps of Engineers typically requires that impacts to waters of the U.S. be avoided where



COSUMNES POWER PLANT (01-AFC-19)  
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possible. Consideration should be given to modifying the site to avoid encroachment into the stream channel.

## DATA REQUEST

247. Please provide a map showing the location of the 100-year floodplain of Clay Creek which includes the water surface elevations on and adjacent to the CPP site.

**Response:** The Applicant is trying to determine if we have enough data to respond to these questions. We'll provide an update on May 6, 2002.

248. Please provide 100-year discharges for the Clay Creek tributaries that will be diverted by the CPP (Waanan and Crippen method is acceptable).

**Response:** The Applicant is trying to determine if we have enough data to respond to these questions. We'll provide an update on May 6, 2002.

249. Please provide conceptual descriptions and hydraulic capacities of the catchment and conveyance structures for the tributary flow to be diverted. The descriptions should be sufficient to assess whether capturing and diverting this flow as shown on the site plan is practical.

**Response:** The Applicant is trying to determine if we have enough data to respond to these questions. We'll provide an update on May 6, 2002.

250. Please provide post-development flow velocities adjacent to structures proposed to be within the 100-year floodplain including the detention basin if applicable. Please provide the rationale for determining whether these flow velocities are low enough to allow vegetative erosion protection, or whether a non-erodible lining is required.

**Response:** The Applicant is trying to determine if we have enough data to respond to these questions. We'll provide an update on May 6, 2002.

## BACKGROUND

Data Request 147 requested mapping of riparian areas affected by the pipeline construction. Data Request 148 requested evidence of consultation with the U.S. Army Corps of Engineers, CVRWQCB, and California Department of Fish and Game regarding the proposed riparian disturbance. Evidence of consultation should include applications for a 404 Permit, 401 Water Quality Certification, and a California Fish and Game Code 1601 Streambed Alteration Agreement. Data Responses 147 and 148 in Set 1A and Set 1D stated that mapping and 401, 404 and 1601 permit applications are being prepared.

## DATA REQUEST

251. Please provide the mapping and completed applications referred to in the responses to Data Requests 147 and 148.

**Response:** Permits that are complete will be provided by May 6, 2002. The others will be provided upon receipt.

## BACKGROUND

On March 15, 2002, the Sacramento Regional County Sanitation District (SRCSD) responded to Mr. Colin Taylor's February 25, 2002, letter requesting reclaimed water information from the Sacramento Regional Wastewater Treatment Plant (SRWTP). In their letter, SRCSD states that by this summer they expect to have operational a 5 MGD recycled water facility that can be expanded to 10 MGD or larger if demand warrants.

SRCSD further states that this is a unique opportunity to construct a recycled water pipeline that can be installed in parallel to the SMUD gas line resulting in considerable savings in pipeline installation, right of way and other costs by co-constructing the natural gas and recycled water lines. In order for SRCSD to fully evaluate the shared cost of a parallel pipeline, SRCSD requested additional information from SMUD be provided by April 15, 2002.

## DATA REQUEST

252. Please provide a copy of SMUD's responses to the additional information requested by SRCSD in their letter of March 15, 2002. For the CPP, please provide the following data:

- proposed gas pipeline alignment drawings
- cost of gas line excavation, pipe cost, installation and any other relevant costs
- right of way costs
- zero discharge facility capital cost
- zero discharge facility O&M cost

**Response:** The attached letters from SMUD to the SRCSD and to CEC Project Manager Kristy Chew respond directly to the issues raised by the SRCSD in their referenced March 15, 2002 letter. In addition, much of the specific information requested in Data Request 252 and 253 has already been provided in the AFC or in past responses to Data Requests.

The proposed gas pipeline alignment drawings were provided in the AFC, Section 6, Figures 6.1-1 through 6.1-7, as updated in Data Response #223.

COSUMNES POWER PLANT (01-AFC-19)  
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Based on SMUD's actual cost of constructing its existing gas pipeline system and its current budget projections, SMUD estimates that the total cost of gas line design and construction, including excavation and pipe cost, will average over \$1 million per mile for a total of \$26 -35 million. The actual costs will depend on the final route and mitigation ordered by the CEC and the amount of the construction bids.

Based on SMUD's actual cost of acquiring its existing gas pipeline rights-of-way, and its current budget projections based on land appreciation costs over the last seven years, SMUD estimates that the gas pipeline right-of-way acquisition costs will be about \$2.8 million.

The zero discharge facility capital and operation and maintenance (O&M) costs are provided in SMUD Data Response 1.E (Power Plant Cooling Analysis), section 2.4; in particular, section 2.4.4 and Appendix B-4.

253. For the parallel recycled water pipeline, please provide those costs above that of the SMUD pipeline which consist of:

- cost of recycled water pipeline excavation, pipe cost, installation labor, and any other relevant costs
- right of way cost
- zero discharge facility capital cost
- zero discharge facility O&M cost

**Response:** See the attached letters from SMUD to the SRCSD and to CEC Project Manager Kristy Chew. In particular, the assumption made by the SRCSD and inherent in the CEC Data Request is invalid, i.e., that it is possible to achieve significant cost savings by building a gas transmission pipeline and recycled water pipeline in parallel. SMUD has not done an independent analysis of the cost of designing and constructing a recycled water pipeline, but would estimate costs as roughly equivalent to the costs of gas pipeline construction referenced in Data Response 252 above. While there may be some savings by reducing the overall width of the right-of-way and by mobilizing construction crews in tandem, such savings would not be significant in comparison to the overall costs of each pipeline, which would probably exceed \$1 million per mile or a total of \$26 - 35 million for each pipeline. Thus, the incremental cost of building a recycled water pipeline above and beyond the gas pipeline would be in the range of \$25 -34 million.

The right of way cost would be in the vicinity of \$2.5 to 2.8 million. There could potentially be some savings by acquiring the right-of-way at the same time as the gas pipeline right-of-way, but any such savings would be offset by the increased

COSUMNES POWER PLANT (01-AFC-19)  
DATA RESPONSES, SET 3A

costs, impacts and complexity of acquiring almost double the width of the currently proposed gas pipeline right-of-way, particularly in sensitive areas. In some locations, it may be necessary to locate the recycled water pipeline in a completely different corridor to minimize environmental or land use impacts.

The zero discharge facility capital and O&M costs would be as stated above in response to Data Request 253.

*Project  
Consumers*

**SOUTHERN CALIFORNIA WATER COMPANY**  
A SUBSIDIARY OF AMERICAN STATES WATER COMPANY

3035 PROSPECT PARK, STE 60 • RANCHO CORDOVA, CA 95670 • (916) 853-3600 • FAX (916) 852-0171

February 13, 2002

SMUD Board  
SMUD  
P.O. Box 15830  
Sacramento, CA 95852

Dear Members of the Board,

On behalf of American States Water and Arden Cordova Water Service, I am writing to address the remarks attributed to me in the article entitled "Power Plant Power Struggle: State Says SMUD Plan Wastes Water," written by Carrie Peyton, and published in the Sunday, February 10, 2002 edition of the Sacramento Bee.

First and foremost, Arden Cordova Water Service recognizes the importance of SMUD's efforts to ensure that Californians have available sufficient quantities of electricity. As a fellow provider of essential public services, we understand all too well the regulatory and legal challenges presented in the normal course of business. We applaud SMUD's determination in fulfilling its public service obligations.

Arden Cordova Water Service and SMUD share a mutual reliance on local water resources in meeting their common mission of providing affordable and reliable public services. As you know, Rancho Cordova is painfully aware of the many constraints placed on our local fresh water resources. My comments to the Bee reporter were intended to communicate frustration over the contamination of our local groundwater resources and the heightened importance of maximizing the beneficial use of the remaining fresh water resources to the communities' benefit. I did not intend to express a priority between SMUD's and Arden Cordova's public service obligations. Simply stated, our shared communities will suffer unless we provide electricity and water.

We recognize and support SMUD's efforts in working within the regional Water Forum on American River issues. All the many parties mutually reliant on local water resources must continue to develop innovative solutions to make every drop of water count.

**RECEIVED**

**FEB 15 2002**

**CORPORATE FILES**

Arden Cordova Water Service respects SMUD's legal rights to use water from the American River. No doubt, SMUD will vigorously protect those rights in meeting its responsibility to the public.

Sincerely,



Donald K. Saddoris  
Vice President Region I

c: Ms. Jan Schori  
General Manager  
SMUD  
P.O. Box 15830  
Sacramento, CA 95852

John Hughes  
Letters Editor  
Sacramento Bee  
P.O. Box 15779  
Sacramento, CA 95852

**SMUD****SACRAMENTO MUNICIPAL UTILITY DISTRICT**  
**The Power To Do More.<sup>SM</sup>**

*P.O. Box 15830, Sacramento, CA 95852-1830; 1-888-742-SMUD (7683)*

March 28, 2002  
CPP02-026

Kristy Chew  
California Energy Commission  
Energy Facilities Siting and Environmental Protection Division  
1516 9th Street, MS-15  
Sacramento, CA 95814-5512

*Via U.S. Mail & Facsimile to (916) 654-3882*

**Re: SRWTP Reclaimed Water – SRCSD letter dated March 15, 2002**

Dear Ms. Chew,

I understand that the California Energy Commission (CEC) is in receipt of Mr. Robert Shanks' March 15, 2002 letter concerning the Sacramento Regional County Sanitation District's (SRCSD) interest in providing reclaimed water from the Sacramento Regional Wastewater Treatment Plant (SRWTP) for use at the Sacramento Municipal Utility District's (SMUD) Cosumnes Power Plant (CPP), currently under development. SMUD appreciates the SRCSD's interest and their offer to work with us on the myriad of challenging issues associated with the use of reclaimed water at CPP that would need to be resolved to partner, including safety, financial sharing, reliability, technical, and environmental. For the record, I am pleased to provide the CEC with clarification of several issues raised in Mr. Shanks' letter, as follows:

First, in my letter CPP02-012 of February 25, 2002 SMUD expressed specific commercial terms under which any potential reclaimed water deal must be undertaken. Namely, SMUD would require a firm, uninterruptible supply of up to 9 million gallons per day (MGD) of reclaimed water conforming to the requirements of Title 22 of the California Code of Regulations for disinfected tertiary reclaimed water, 365 days per year. Since the SRCSD's failure to deliver up to 9 MGD of Title 22 reclaimed water would result in interruption of CPP operations, SMUD would require liquidated damage provisions in any supply contract which would compensate SMUD's customer owners for the cost of replacing lost CPP electrical generation. We feel strongly that the imposed use of reclaimed water at CPP represents an unreasonable burden to SMUD's customer owners and, accordingly, SMUD would require the SRCSD to compensate us for the use of reclaimed water at CPP. Lastly, SMUD would require a firm, contractual commitment from the SRCSD in any supply contract with regard to fixing reclaimed water cost.

Mr. Shanks letter of March 15, 2002 did not respond to SMUD's request of February 25, 2002 as to whether, based on SMUD's conditions for the use of SRWTP reclaimed water expressed in letter CPP02-012, the SRCSD has an interest in providing such reclaimed water for use at CPP. Recently, we have inquired of the SRCSD on this important point.

Second, while Mr. Shanks states in his letter of March 15, 2002 that the SRCSD "... would be glad to work with SMUD to best meet your recycled water needs based on your construction schedule" he did not answer the questions expressed in my letter of February 25, 2002 concerning the availability of reclaimed water. Specifically, I asked in letter CPP02-012 whether or not the SRCSD would have 4.5 MGD of reclaimed water meeting CCR Title 22 regulations available to SMUD on or before June 1, 2004 and a total of 9 MGD of Title 22 reclaimed water available to SMUD no later than June 1, 2007. We have recently inquired of the SRCSD on this issue as well.

Third, Mr. Shanks' letter of March 15, 2002 assumes that a reclaimed water pipeline can be installed in immediate proximity to the 26-mile SMUD natural gas pipeline extension being developed in conjunction with the CPP Project. While we recognize that the SRCSD has considerable experience in the conveyance of wastewater, they have incorrectly assumed that it is advisable to locate a reclaimed water pipeline in such close proximity to the 24" CPP natural gas pipeline. Further, the assumption expressed in Shanks' letter of March 15, 2002 that "... there should be minimal additional right of way cost attributed to the parallel recycled water line" ignores the necessary minimum safe distance between the natural gas pipeline and the proposed reclaimed water line to ensure appropriate corrosion protection as well as the environmental effects, costs, and impacts to the public associated with, in effect, doubling the 15' permanent easement width of the proposed 26-mile linear facility and widening the construction easement. In addition, his assumption concerning right of way does not take into account that such minimum safe distance is not available within, or adjacent to, the Union Pacific railroad right of way for which the 26-mile SMUD natural gas pipeline is proposed to run for much of its length and, as such, an entirely separate easement and linear facility would be necessary for much of the 26-mile route.

Fourth, Mr. Shanks stated in the letter of March 15, 2002 that it was the SRCSD's "... understanding from the RWQCB, that regardless of the water source, zero liquid discharge may be required." It is our belief that an NPDES permit for CPP can be obtained and, therefore, zero liquid discharge will not be required. In fact, as proposed in SMUD's Application for Certification (AFC) to the CEC and in our NPDES permit application to the CRWQCB, the CPP discharge would be very similar to that of the Sacramento Cogeneration Authority Procter & Gamble Cogeneration Project, which has successfully discharged wastewater for many years under the authority of and in compliance with an NPDES permit issued by the CRWQCB. As such, it is a reasonable assumption that mercury and other constituents in SRWTP reclaimed water would preclude discharge of this water via NPDES.

Fifth, we have recently reiterated to the SRCSD that SMUD would require a firm, uninterruptible supply of up to 9 MGD of Title 22 reclaimed water. While we understand that the proposed SRWTP reclaimed water pumping facilities would require outages for repair and maintenance, it would be necessary for the SRCSD to install sufficient redundancy to ensure an uninterruptible supply. As far as a back-up water supply is concerned, Rancho Seco Lake is a recreational facility into which SMUD would never consider discharging reclaimed water. Further, the levels of mercury and other constituents in SRWTP reclaimed water would create human health risk concerns in such a water body where contact recreation and fishing are core activities.



Ms. Kristy Chew  
March 28, 2002  
Page 3

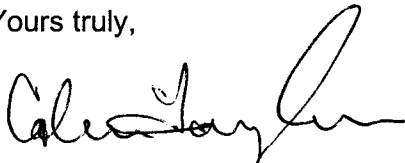
With regard to groundwater, it has been SMUD's expressed intent to avoid the pumping of groundwater for CPP. The pumping of groundwater would place SMUD in direct competition with agricultural interests for the local groundwater supply and could increase both public and agency concern over aquifer depletion. As such, SMUD prefers to avoid a groundwater withdrawal for CPP.

Regarding the Folsom South Canal (FSC), as you know SMUD currently retains water rights totaling 60,000 acre-feet/year from this Bureau of Reclamation project. When built out to full capacity, CPP will only utilize some 8,000 acre-feet of FSC water each year. As proposed in SMUD's AFC, the FSC will be the sole source of water for the Cosumnes Power Plant and is currently the only source of water for SMUD's existing Rancho Seco operations.

Sixth, as to the Request for Information attached to Mr. Shanks' letter of March 15, 2002 SMUD believes the SRCSD's proposed study methodology to be inappropriate and has declined to provide the requested information to the SRCSD. As proposed in the AFC, CPP is not designed to utilize reclaimed water nor are the linear facilities necessary to transport such waters proposed in conjunction with the CPP Project. Your agency has raised the use of reclaimed water as an issue in the course of your evaluation of the CPP AFC and has directed SMUD to study the possible use of reclaimed water. SMUD has already completed and submitted the required studies. Further study on the part of the SRCSD will not be necessary.

Ms. Chew, thank you for the opportunity to provide these clarifications concerning the potential use of reclaimed water at CPP. Should you have any questions in this matter, please don't hesitate to give me a call at (916) 732-6724 or Mr. Kevin Hudson at (916) 732-7101.

Yours truly,

A handwritten signature in black ink, appearing to read 'Colin Taylor', with a stylized, flowing script.

Colin Taylor  
Director, Cosumnes Power Plant Project

cc: Jim Shetler  
Bob Nelson  
Steve Cohn  
Kevin Hudson  
Joe Pennington  
Richard Anderson, CEC  
Richard Latteri, CEC  
Patricia Leary, CRWQCB  
Corporate Files

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March 28, 2002  
CPP02-023

Mr. Robert Shanks  
District Engineer  
Sacramento Regional County Sanitation District  
10545 Armstrong Avenue, Suite 101  
Mather, California 95655

*Via U.S. Mail & Facsimile to (916) 876-6160*

**Re: SRWTP Reclaimed Water – Response to your letter dated March 15, 2002**

Dear Bob,

It was with considerable disappointment that I received your letter of March 15, 2002 concerning the Sacramento Regional County Sanitation District's (SRCSD) interest in providing reclaimed water from the Sacramento Regional Wastewater Treatment Plant (SRWTP) for use at the Sacramento Municipal Utility District's (SMUD) Cosumnes Power Plant (CPP), currently under development. While your interest in discussing this matter is appreciated, the manner in which you responded to my letter of February 25, 2002 was less than productive.

First, in my letter CPP02-012 of February 25, 2002 SMUD expressed specific commercial terms under which any potential reclaimed water deal must be undertaken. Namely, SMUD would require a firm, uninterruptible supply of up to 9 million gallons per day (MGD) of reclaimed water conforming to the requirements of Title 22 of the California Code of Regulations for disinfected tertiary reclaimed water, 365 days per year. Since the SRCSD's failure to deliver up to 9 MGD of Title 22 reclaimed water would result in interruption of CPP operations, SMUD would require liquidated damage provisions in any supply contract which would compensate SMUD's customer owners for the cost of replacing lost CPP electrical generation. Given that the imposed use of reclaimed water at CPP represents an unreasonable burden to SMUD's customer owners, SMUD would require the SRCSD to compensate us for the use of reclaimed water at CPP. Lastly, SMUD would require a firm, contractual commitment from the SRCSD in any supply contract with regard to fixing reclaimed water cost.

Bob, your letter of March 15, 2002 did not respond to SMUD's request of February 25, 2002 as to whether, based on SMUD's conditions for the use of SRWTP reclaimed water expressed in letter CPP02-012, the SRCSD has an interest in providing such reclaimed water for use at CPP. Further, instead of stepping up to the plate with a commitment to share in the costs associated with the potential delivery of reclaimed water to CPP you have responded in an ambiguous fashion, copying representatives of the California Energy Commission (CEC) and California Regional Water Quality Control Board (CRWQCB), Central Valley Region. Instead of bringing clarity to the situation, your letter of March 15, 2002 can only serve to complicate the CPP licensing process. In addition, many of your statements contain misinformation that, if taken at face value

Mr. Robert Shanks

March 28, 2002

Page 2

by the CEC or CRWQCB, could unnecessarily delay the licensing and add significantly to the capital and operating cost of CPP to the disadvantage of SMUD's customer-owners.

Second, while you state in your letter of March 15, 2002 that the SRCSD "... would be glad to work with SMUD to best meet your recycled water needs based on your construction schedule" you did not answer the questions expressed in my letter of February 25, 2002 concerning the availability of reclaimed water. Specifically, I asked in letter CPP02-012 whether or not the SRCSD would have 4.5 MGD of reclaimed water meeting CCR Title 22 regulations available to SMUD on or before June 1, 2004 and a total of 9 MGD of Title 22 reclaimed water available to SMUD no later than June 1, 2007. I would appreciate a direct answer to this question.

Third, your letter of March 15, 2002 assumes that a reclaimed water pipeline can be installed in immediate proximity to the 26-mile SMUD natural gas pipeline extension being developed in conjunction with the CPP Project. While we recognize that the SRCSD has considerable experience in the conveyance of wastewater, it is also understood that your organization does not have experience in natural gas pipeline engineering, construction, installation, operation, and maintenance. As such, you have incorrectly assumed that it is advisable to locate a reclaimed water pipeline in such close proximity to the 24" CPP natural gas pipeline. Further, the assumption expressed in your letter of March 15, 2002 that "... there should be minimal additional right of way cost attributed to the parallel recycled water line" ignores the necessary minimum safe distance between the natural gas pipeline and the proposed reclaimed water line to ensure appropriate corrosion protection as well as the environmental effects, costs, and impacts to the public associated with, in effect, doubling the 15' permanent easement width of the proposed 26-mile linear facility and increasing the construction easement width. In addition, your assumption concerning right of way does not take into account that such minimum safe distance is not available within, or adjacent to, the Union Pacific railroad right of way for which the 26-mile SMUD natural gas pipeline is proposed to run for much of its length and, as such, an entirely separate easement and linear facility would be necessary for much of the 26-mile route.

Fourth, you stated in your letter of March 15, 2002 that it was your "... understanding from the RWQCB, that regardless of the water source, zero liquid discharge may be required." It is our belief that an NPDES permit for CPP can be obtained and, therefore, zero liquid discharge will not be required. In fact, as proposed in SMUD's Application for Certification (AFC) to the CEC and in our NPDES permit application to the CRWQCB, the CPP discharge would be very similar to that of the Sacramento Cogeneration Authority Procter & Gamble Cogeneration Project, which has successfully discharged wastewater for many years under the authority of and in compliance with an NPDES permit issued by the CRWQCB. As such, it is a reasonable assumption that mercury and other constituents in SRWTP reclaimed water would preclude discharge of this water via NPDES.

Fifth, I must reiterate that SMUD would require a firm, uninterruptible supply of up to 9 MGD of Title 22 reclaimed water. While we understand that the proposed SRWTP reclaimed water pumping facilities would require outages for repair and maintenance, it would be necessary for the SRCSD to install sufficient redundancy to ensure an

Mr. Robert Shanks  
March 28, 2002  
Page 3

uninterruptible supply. As far as a back-up water supply is concerned, Rancho Seco Lake is a recreational facility into which SMUD would never consider discharging reclaimed water. Further, the levels of mercury and other constituents in SRWTP reclaimed water would create human health risk concerns in such a water body where contact recreation and fishing are core activities.

With regard to groundwater, it has been SMUD's expressed intent to avoid the pumping of groundwater for CPP. The pumping of groundwater would place SMUD in direct competition with agricultural interests for the local groundwater supply and could increase both public and agency concern over aquifer depletion. As such, SMUD prefers to avoid a groundwater withdrawal for CPP.

Regarding the Folsom South Canal (FSC), as you may well know SMUD currently retains water rights totaling 60,000 acre-feet/year from this Bureau of Reclamation project. When built out to full capacity, CPP will only utilize some 8,000 acre-feet of FSC water each year. As proposed in SMUD's AFC, the FSC will be the sole source of water for the Cosumnes Power Plant and is currently the only source of water for SMUD's existing Rancho Seco operations.

Sixth, as to the Request for Information attached to your letter of March 15, 2002, SMUD believes the SRCSD's proposed study methodology to be inappropriate and hereby declines to provide any such information to the SRCSD. As proposed in the AFC, CPP is not designed to utilize reclaimed water nor are the linear facilities necessary to transport such waters proposed in conjunction with the CPP Project. The CEC has raised the use of reclaimed water as an issue in the course of their evaluation of the CPP AFC and has directed SMUD to study the possible use of reclaimed water. SMUD has already completed and submitted the required studies. Further study on the part of the SRCSD will not be necessary.

Lastly, I am pleased to accept your invitation to formally meet and discuss these issues further and will be in contact with your office to schedule the meeting. Should either you or Mr. Kido desire to discuss this matter prior to our meeting please don't hesitate to call me at (916) 732-6724 or Mr. Bob Nelson at (916) 732-5139.

Sincerely,



Colin Taylor  
Director, Cosumnes Power Plant Project

cc: Jim Shetler  
Bob Nelson  
Steve Cohn  
Kevin Hudson  
Joe Pennington  
Wendell Kido, SRCSD  
Corporate Files